



REQUEST FOR COUNCIL ACTION

City of Greenville, South Carolina

Agenda Item No.

11b

TO: Honorable Mayor and Members of City Council

FROM: John F. McDonough, City Manager

☐ Ordinance/First Reading ☒ Ordinance/Second & Final Reading ☐ Resolution/First & Final Reading ☐ Information Only

AGENDA DATE REQUESTED: January 24, 2022

ORDINANCE/RESOLUTION CAPTION:

ORDINANCE TO REZONE APPROXIMATELY 12.79 ACRES OF REAL PROPERTY LOCATED ON NORTH PLEASANTBURG DRIVE, LAURENS ROAD, AND AIRPORT ROAD FROM C-3, REGIONAL COMMERCIAL DISTRICT, TO PD, PLANNED DEVELOPMENT DISTRICT (TAX MAP NUMBERS 0256000600100, 0256000600101, 0256000600102, 0256000601201, 0256000600200) (Z-34-2021) (REVISED)

SUMMARY BACKGROUND:

Marcus McCall (the "Applicant"), on behalf of Enclave Laurens, LLC and Laurens 24, LLC, owners of property consisting of approximately 12.79 acres located on North Pleasantburg Drive, Laurens Road, and Airport Road (Tax Map Numbers 0256000600100, 0256000600101, 0256000600102, 0256000601201, 0256000600200) (the "Property"), applied to the City Planning Commission and City Council to rezone the Property from C-3, Regional commercial district, to PD, Planned development district. The rezoning application proposes a site plan of five buildings containing roughly 80,000 square feet of commercial (office, retail, restaurant), and roughly 125 rooms of hotel, or roughly 60,000 square feet of office space, or roughly 400 units of multi-family with integrated parking decks.

The City Planning Commission, pursuant to public notice, held a public hearing on November 18, 2021, to consider the proposed rezoning and the application was recommended for approval by a vote of 7-0 with staff comments and conditions along with the following additional Planning Commission conditions: Striking out the last sentence of staff condition No. 1 so that the FDP associated with each phase of the project shall come back to the Planning Commission for approval, the project will meet or exceed the Downtown Design Guidelines, 10% percent of the rental multi-family units shall be affordable (80% AMI) for 20 years, and a future traffic model is to be conducted modeling the project at build-out.

Planning Staff Recommendation: Approve with staff comments and conditions

Planning Commission Recommendation: Approval with conditions by a vote of 7-0

REVISED: The Ordinance was amended during the first reading to include a condition requiring a final development plan for the initial phase of the project to be submitted within three years of the effective date of this Ordinance. The Ordinance has been amended to include the condition.

IMPACT IF DENIED:

The Property will not be rezoned.

FINANCIAL IMPACT:

None

REQUIRED SIGNATURES

Department Director

DocuSigned by:

Jonathan Graham

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City Attorney

DocuSigned by:

Leigh Paolletti

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OMB Director

City Manager

John McDonough

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REVISED 1/24/2022

Ordinance No. 2022-____

AN ORDINANCE

TO REZONE APPROXIMATELY 12.79 ACRES OF REAL PROPERTY LOCATED ON NORTH PLEASANTBURG DRIVE, LAURENS ROAD, AND AIRPORT ROAD FROM C-3, REGIONAL COMMERCIAL DISTRICT, TO PD, PLANNED DEVELOPMENT DISTRICT (TAX MAP NUMBERS 0256000600100, 0256000600101, 0256000600102, 0256000601201, 0256000600200) (Z-34-2021)

WHEREAS, Marcus McCall (the “Applicant”), on behalf of Enclave Laurens, LLC and Laurens 24, LLC, owners of property consisting of approximately 12.79 acres located on North Pleasantburg Drive, Laurens Road, and Airport Road (Tax Map Numbers 0256000600100, 0256000600101, 0256000600102, 0256000601201, 0256000600200) (the “Property”), applied to the City Planning Commission and City Council to rezone the Property from C-3, Regional commercial district, to PD, Planned development district; and

WHEREAS, the rezoning application proposes a site plan of five buildings containing roughly 80,000 sf of commercial (office, retail, restaurant), and roughly 125 rooms of hotel, or roughly 60,000 sf of office space, or roughly 400 units of multi-family with integrated parking decks (collectively, the “Project”); and

WHEREAS, the Project will feature a mixed-use commercial building at the corner confluence of North Pleasantburg Drive, Laurens Road, and Airport Road, a mixed-use building on Airport Road, a multi-family residential building with integrated structured parking on Airport Road, a Hotel, office, or multi-family residential building with integrated structured parking on North Pleasantburg, and a multi-family residential or hotel building with integrated structured parking on North Pleasantburg Drive where the uses will be interconnected with shared parking areas, access points, driveways, open spaces, sidewalks, connection to the future Swamp Rabbit Trail extension, and associated site infrastructure; and

WHEREAS, the foregoing project-specific features, details, and specifications are more fully set forth in the documents attached hereto and incorporated herein as Exhibit B (the “PD Documents”); and

WHEREAS, the City Planning Commission, pursuant to public notice, held a public hearing on November 18, 2021, to consider the proposed rezoning and the application was recommended for approval by a vote of 7-0 with staff comments and conditions along with the following additional Planning Commission conditions: (a) Striking out the last sentence of Staff Condition No. 1 so that each Final Development Plan (the “FDP”) associated with each phase of the Project shall come back to the Planning Commission for approval; (b) that the Project will meet or exceed the C-4, Central Business District Downtown Design Guidelines; (c) 10% of the multi-family rental units shall be maintained as affordable housing (80% AMI) for a period of 20 years; and, (d) a future traffic model be conducted modeling the Project at build-out (collectively, the “PC Conditions”); and

WHEREAS, City Council finds the PD, Planned development district to be compatible with the City’s Comprehensive Development Plan and with the zoning of surrounding properties;

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF GREENVILLE, SOUTH CAROLINA, as follows:

Section 1. Subject to Section 2 below, the Property shall be rezoned from C-3, Regional commercial district, to PD, Planned development district. The attached maps shown as Exhibit A, prepared by the City of Greenville Zoning Division, are incorporated by reference for purposes of identifying the location of the Property.

Section 2. The PD is hereby approved for the Property as set forth in the PD Documents, subject to all comments and conditions included in the Planning Staff Report attached hereto and incorporated herein as Exhibit C (the "Staff Report and Conditions") and the PC Conditions. In the event of a conflict, the following shall establish the order of precedent and control: (a) the PC Conditions; (b) the Staff Report and Conditions; and (c) the PD Documents.

Section 3. As an additional condition to the PD approval, a final development plan for the initial phase of the project, as determined by the developer, must be submitted for approval within three years of the effective date of this Ordinance, and if the final development plan for the initial phase of the project has not been submitted within that period, and City Council determines following notice and a hearing that the landowner has failed to meet the terms of the conditional approval, then the Administrator shall initiate the rezoning of the property to an appropriate zoning classification in conformity with the comprehensive plan.

Section ~~4~~3. The City Manager, in consultation with the City Attorney, may make or accept minor modifications to the wording and designations of the attached documents as may be necessary or appropriate, provided there is no compromise of the substantive purposes of this Council action. Should the City Manager or City Attorney, or both, determine that any modification of previously negotiated terms is significant and warrants further action by City Council, then the matter shall be presented to Council for further review before the final execution.

Section ~~5~~4. That this Ordinance shall be effective upon second and final reading.

DONE, RATIFIED AND PASSED THIS THE _____ DAY OF _____, 2022.

MAYOR

ATTEST:

CITY CLERK

APPROVED AS TO FORM:

CITY ATTORNEY

REVIEWED:

CITY MANAGER

EXHIBIT A

Z-34-2021 • N. PLEASANTBURG DRIVE, LAURENS ROAD AND AIRPORT ROAD

AERIAL VIEW



CURRENT ZONING



FUTURE LAND USE



Z-34-2021 • N. PLEASANTBURG DRIVE, LAURENS ROAD AND AIRPORT ROAD

SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



NATURAL / ENVIRONMENTAL FEATURES



EXHIBIT B


**APPLICATION FOR REZONE -
PLANNED DEVELOPMENT DISTRICT (PD)**

Contact Planning & Development (864) 467-4476

Office Use Only:
 Application# _____ Fees Paid _____
 Date Received _____ Accepted By _____
 Date Complete _____ App Deny Conditions _____
APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	Marcus McCall	Enclave Laurens, LLC (McCall Capital); Laurens 24, LLC (McCall Capital)
*Title:	President / Manager of McCall Capital, LLC	
*Address:	531 S. Main St., Suite 207	531 S. Main St., Suite 207
*State:	South Carolina	South Carolina
*Zip:	29601	29601
*Phone:	864-370-0037	864-370-0037
*Email:	mm@mccallcap.com	mm@mccallcap.com

PROPERTY INFORMATION

*STREET ADDRESS NE of Intersection of N. Pleasantburg Drive, Laurens Road, & Airport Road

*TAX MAP #(S) 0256000600100; 0256000600101; 0256000600102; 0256000601201; 0256000600200

*CURRENT ZONING DESIGNATION C-3

*PROPOSED ZONING DESIGNATION Planned Development District (PD)

*TOTAL ACREAGE ±12.79 AC

*PROPOSED PD NAME Enclave Laurens (final name TBD)

INSTRUCTIONS

1. The applicant is strongly encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

PREAPPLICATION MEETING DATE 08/09/2021

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
3. If the application is to designate a portion of a property as Planned Development (PD), otherwise described by deed, a survey of the parcel reflecting the requested designation(s) by courses and distances must be included in the submittal package.
4. In addition to the Planned Development (PD) required documents, as set forth in **Sections 19-2.3.3, Planned development district, and 19-3.2 (N), PD: Planned development district**, the applicant/owner must respond to the "Standards" questions on page 4 of this application. A separate sheet may be attached to address these questions.



5. All applications and fees (made payable to the City of Greenville) for designation as a Planned Development (PD) must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

A. Planned Development (PD) - New	\$550.00 – Zoning Map Amendment, <i>public hearing required</i>
B. Major Deviations	\$275.00 – Planned Development (PD), <i>public hearing required</i>
C. Minor Deviations	\$150.00 – Planned Development (PD), <i>administrative review</i>

6. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.

7. Please refer to **Sections 19-2.3.3, Planned development district**, and **19-3.2 (N), PD: Planned development district** for additional information.

8. **Public Notice Requirements.** Planned Development (PD) applications require a planning commission public hearing. Additionally, informal review from the design review board is required prior to the planning commission hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

Planned Development (PD) applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information. *Neighborhood Meeting held October 12, 2021*

Upon planning commission recommendation, the application item will be scheduled for city council hearing.

(To be filled out at time of application submittal)

_____ Public Hearing signs are acknowledged as received by the applicant

_____ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

***APPLICANT SIGNATURE**

9. Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy, one (1) binder and one (1) electronic version of the application submittal package.

Binder Requirements:

- Three-ring binder
- PD Name on front cover and spine of binder
- Five (5) Tabs with the following labels: Location / Existing Zoning; Submitted Application; Public Notice and Comments; Planning Commission / Staff Report; City Council / Ordinance

10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application, including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

CITY OF GREENVILLE APPLICATION FOR REZONE – PLANNED DEVELOPMENT DISTRICT


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Furthermore, my signature (applicant) indicates that I understand and consent that this matter will appear before the Planning Commission for consideration and that any recommendation, for approval or denial, by the Planning Commission will be presented to the City Council at their next regularly scheduled meeting to be held on the fourth Monday of the month following the Planning Commission meeting in which the matter was heard.

 ***APPLICANT SIGNATURE**
10/18/2021 DATE

11. To that ☒d, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ☐ or is not ☒ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

*Signatures	
Applicant	Marcus McCall
Date	10/18/2021
Property Owner/Authorized Agent	Enclave Laurens, LLC (McCall Capital); Laurens 24, LLC (McCall Capital)
Date	10/18/2021

APPLICATION REQUIREMENTS

1. Planned Development (PD) format and content requirements are reflected in the City of Greenville code under **Sections 19-2.3.3, Planned development district, and 19-3.2 (N), PD: Planned development district**
2. Plan and information requirements:
 - a. **PD Regulating Plan** – submit a regulating master plan for the proposed planned development, which includes the following elements:
 - a. Contextual site information
 - b. Total acreage of overall site
 - c. Location and number of acres of various areas by type of use (Sec. 19-4.3, Use-specific standards)
 - d. Location, orientation, height and number of stories of existing and proposed buildings
 - e. Location of open space, landscaping and site features (Sec. 19-6.2, Landscaping, buffering, and screening)
 - f. Number of dwelling units and density of various residential types and approximate number of bedrooms in each residential unit
 - g. Square footage of non-residential use
 - h. Building elevations to depict mass, form, roofline, and fenestration patterns
 - i. Building and hardscape materials
 - j. Primary traffic circulation pattern
 - k. Location of parking areas and approximate number of spaces dedicated to each use type (Sec. 19-6.1, Off-street parking and loading)
 - b. **Statement of Intent** – submit a descriptive statement setting forth the characteristics and purpose of the proposed PD, which includes the following information:
 - a. Unique aspects of design and development





- b. Procedures of any proposed homeowners' association or other group maintenance agreement
- c. Proposed development schedule
- d. Public improvements both on and off-site and estimate time schedule for providing such improvements
- e. Impact on public facilities and letters from the appropriate agencies or districts verifying service availability
- f. Architectural style, appearance and orientation of proposed buildings
- c. Sign Plan – submit a comprehensive sign plan for the PD (Sec. 19-6.6, Sign regulations)
- d. Final Development Plan – upon public hearing approval, submit a final development plan for administrative review and approval

SUPPORTING INFORMATION – STANDARDS QUESTIONS

Applicant response to Section 19-3.2(N) General Development Parameters

(Please attach separate sheet if additional space is need)

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT PROVIDES A MIX OF USES.
see attached

2. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT UTILIZES CLUSTER OR TRADITIONAL NEIGHBORHOOD DEVELOPMENT PRINCIPLES TO THE GREATEST EXTENT POSSIBLE THAT IS INTERRELATED AND LINKED BY PEDESTRIAN WAYS, BIKE WAYS, AND TRANSPORTATION SYSTEMS.
see attached

3. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT RESULTS IN LAND USE PATTERNS THAT PROMOTE AND EXPAND OPPORTUNITIES FOR PUBLIC TRANSPORTATION AND AN EFFICIENT AND COMPACT NETWORK OF STREETS, ETC.
see attached

4. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT WILL BE COMPATIBLE WITH THE CHARACTER OF SURROUNDING LAND USES AND MAINTAIN AND ENHANCE THE VALUE OF SURROUNDING PROPERTIES.
see attached



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**APPLICATION FOR REZONE –
PLANNED DEVELOPMENT DISTRICT (PD)
SUPPORTING INFORMATION – STANDARD QUESTIONS**

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT PROVIDES A MIX OF USES

The proposed site plan ("Redevelopment Site") subject to this PD application consists of the following primary uses: Commercial, including retail, restaurant, and/or office uses; Multi-family residential, including a range of housing to support various income levels; and either a Hotel or large Office, depending on market demand.

The type of restaurant / retail uses envisioned for the project consist of supporting neighborhood retail shops and sit-down restaurants with indoor and outdoor café style seating. Sited strategically within the development will be designed open spaces that will act as passive park spaces and plaza areas interconnected through multi-modal facilities. These locations will remain under the control and maintenance of the owner for the use and enjoyment of the residents living on-site, hotel guests / office tenants, and customers of the various commercial uses. In addition, improvements to the spaces may include benches, pathways, fencing and other passive elements that will help to improve the use and enjoyment of these spaces. Proposed uses will include both public and private amenities as well as a combination of structured and surface parking. Additionally, the combination of uses proposed in the development complement one another to reduce the parking demand during peak hours (i.e. office and commercial use parking demands are highest during normal business hours whereas parking demand for residential uses is highest after normal business hours).

2. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT UTILIZES CLUSTER OR TRADITIONAL NEIGHBORHOOD DEVELOPMENT PRINCIPLES TO THE GREATEST EXTENT POSSIBLE THAT IS INTERRELATED AND LINKED BY PEDESTRIAN WAYS, BIKE WAYS, AND TRANSPORTATION SYSTEMS.

The Redevelopment Site will be connected through an internal street network, bicycle and pedestrian pathways, plaza areas, and open space. A multi-use trail connection is proposed which allows the "Main Street" to serve as a truly multi-modal connection to the residential and commercial areas, the Laurens Road / Airport Road corridor, and beyond. Generous sidewalks will be provided, both internal and external to the property. Street trees and other landscape elements will be installed to provide enhanced streetscapes and to create an aesthetically pleasing and safe streetscape for all users as well as a physical buffer from vehicles. On-street parking is included and will provide additional separation for bicyclists and pedestrians as well as calm traffic. Parking will consist of structured parking with surface parking areas integrated into the street network and landscaped to help it blend harmoniously within the development. With a strong emphasis on multi-modal transportation and fully embracing and engaging the future Swamp Rabbit Trail Extension, the Redevelopment Site is congruent with the goals of the GVL 2040 Comprehensive Plan by making a range of appealing and safe mobility options possible along Greenville's major corridors to reduce dependence on cars.

3. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT RESULTS IN LAND USE PATTERNS THAT PROMOTE AND EXPAND OPPORTUNITIES FOR PUBLIC TRANSPORTATION AND AN EFFICIENT AND COMPACT NETWORK OF STREETS, ETC.

The proposed Redevelopment Site will create a compact, high-density, neighborhood village destination located at the intersection of two commercial corridors and along the planned Swamp Rabbit Trail Greenway connecting Downtown and the CU-ICAR campus. The proposed plan utilizes the existing, adjacent street network and enhances the public realm by providing a distinct edge comprised of commercial and residential buildings as



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well as proposing streetscape improvements consistent with the Greenville Downtown Design Guidelines. The main entry into the site from Airport Rd. will serve as a "Main Street" for the development. The incorporation of green infrastructure, pedestrian plazas, and bicycle/pedestrian facilities will allow this area to serve both functionally and as a user amenity. Commercial and residential uses will be placed along the streets and fronting the future Swamp Rabbit Trail Extension in order to help activate the public realm.

The intent of the plan is to provide a high-density mixture of uses that extends the development patterns of the Central Business District eastward. The commercial uses proposed will service not only the residential uses of the Redevelopment Site but also the east side of downtown and the surrounding neighborhoods. Its prominent location along busy thoroughfares make it very accessible and provides an ideal opportunity to introduce public transportation opportunities at this location. Public transit opportunities will be offered with a potential future Greenlink bus stop centrally located within the site. Ridesharing (i.e. Uber and Lyft) will also be accommodated with a safe and convenient internal drop-off location.

While some parking will be provided internally via on-street, surface parking the vast majority will be provided via structured parking. The extensive use of structured parking, as well as underground detention, allows for greater densities to be achieved in a compact, efficient development while also preserving essential space for amenities, landscaping, and open space.

These principles are consistent with the goals of the GVL 2040 Comprehensive Plan by embracing a traditional, higher density urban form and using it as a model for growth in community nodes distributed across the City.

4. DESCRIBE THE WAYS IN WHICH THE PROPOSED PLANNED DEVELOPMENT WILL BE COMPATIBLE WITH THE CHARACTER OF SURROUNDING LAND USES AND MAINTAIN AND ENHANCE THE VALUE OF SURROUNDING PROPERTIES.

The Redevelopment Site currently exists as a vacant site consisting of abandoned surface parking lot(s), building pads, and site laydown areas with miscellaneous site pads associated with the former developments. The extensive improvements proposed for the Redevelopment Site seeks to create an inviting gateway into the Downtown. By its very nature, this is in-line with the spirit of the GVL 2040 Comprehensive Plan goal of preserving remaining undeveloped land to protect Greenville's quality of life, the environment, and to facilitate a new way of growing.

The architecture of the residential buildings will continue the existing character and narrative of the surrounding land uses factory and industrial influence, with modernized, streamlined and simplified detailing. The architecture of the commercial buildings is in keeping with the urban location of the development featuring warehouse and industrial influences on structures with expansive storefronts allowing views into the buildings. A plaza with outdoor seating will provide ample queuing from the building entry to the sidewalk zone and parking areas. New retail offerings will provide greater opportunity for residents of both the Redevelopment Site and other nearby neighborhoods to walk or bike to shopping and dining, as well as create a destination for shopping, dining, and recreation on the east side of Downtown.



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A. STATEMENT OF INTENT

1.0 INTRODUCTION

This statement of intent is to describe in detail the proposed mixed-use development of a ±12.79-acre site located at the intersection of N. Pleasantburg Drive (SC 291), Laurens Road (US 276), Airport Road (S-23-558) and Swamp Rabbit Trail (the "Redevelopment Site"). The total site includes multiple parcels, as identified on the following Tax Sheets:

<i>Parcel ID</i>	<i>Existing Zoning</i>	<i>Acreage</i>
0256000600100	C-3	7.006
0256000600101	C-3	1.846
0256000600102	C-3	1.308
0256000601201	C-3	1.740
0256000600200	C-3	0.890

The properties comprising the Redevelopment Site are owned by Enclave Laurens, LLC and Laurens 24, LLC, each a subsidiary of McCall Capital, LLC, the Developer/Sponsor of the project. McCall Capital is a real estate development and capital investment firm headquartered in Greenville with extensive experience in developing, capitalizing, and investing in real estate properties in Greenville, the Carolina's, and Southeastern United States.

The Redevelopment Site is located at the intersection of two commercial corridors and is part of the redevelopment corridor along the planned Swamp Rabbit Trail ("SRT") greenway extension connecting downtown and the CU-ICAR campus.

The proposed Redevelopment Site is intended to be an integrated mixed-use development with multi-family residential (apartments and/or condominiums), hotel, office, retail, and restaurant development offerings. The Planned Development District (PD) Regulating Plan submitted in conjunction with this Statement of Intent indicates approximately:

- Up to 400 multifamily residential dwelling units (apartments and/or condominiums)
- Up to 88,000 square feet of commercial space (restaurant / retail / office)
- Up to 125-room hotel or up to 60,000 square feet of additional office space
- Note, Maximum Building Height of all proposed buildings/uses not to exceed 100 feet

The Redevelopment Site will be connected through an internal street network, bicycle and pedestrian pathways, plaza areas, and open space. A Planned Development District (PD) zoning classification is required to allow for innovative and creative design techniques incorporating multiple product uses, and flexibility in density, building heights and setbacks, parking requirements, and open space incorporation.

There will be a master agreement amongst the various uses to govern and delineate the responsibilities and allocations of expenses and cost to operate and maintain the shared common areas and infrastructure of the planned development.

2.0 EXISTING ZONING AND SITE CONDITIONS

The Redevelopment Site currently has a C-3 (regional commercial district) zoning classification. The Redevelopment Site currently exists as a vacant site consisting of abandoned surface parking lot(s), building pads, and site laydown areas with miscellaneous site pads associated with the former developments. Vegetation consists of existing parking island trees, scattered brush along the edges of the property, and established trees to the north and east. Adjacent zoning classifications consist of C-3 (regional commercial district), S-1 (service district), and RM-1 (single-family and multifamily residential district). The only abutting zoning classification is S-1 (service district).



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The property is in the Greenville County School District and currently zoned for Sara Collins Elementary School, Beck International Academy Middle School and J.L. Mann Senior High School. The school district has confirmed these assignments and service of the proposed redevelopment.

3.0 TRANSPORTATION, DRAINAGE, AND UTILITIES

The Redevelopment Site fronts on Laurens Road and has direct access to Airport Road via a full access main entry drive and N. Pleasantburg Drive on-ramp via a proposed right-in/right-out. Parking will be provided internally via on-street, surface parking, and structured parking. Additionally, the combination of uses proposed in the development complement one another to reduce the parking demand during peak hours (i.e., office and commercial use parking demands are highest during normal business hours whereas parking demand for residential uses is highest after normal business hours).

Public transit opportunities will be offered with a potential future Greenlink bus stop centrally located within the site. Ridesharing (i.e., Uber and Lyft) will also be accommodated with a safe and convenient internal drop-off location.

Sanitary sewer service is provided by The City of Greenville and ReWa via a new upgraded sanitary sewer line constructed by McCall Capital on behalf of The City of Greenville. The Greenville Water System provides water service. Piedmont Natural Gas provides natural gas service. Duke Energy provides electric power to serve the site. The City of Greenville presently provides essential services such as fire protection and police protection. Discussions have been held with the providers regarding these services and their ability to continue to serve the Redevelopment Site has been confirmed.

The storm sewer system will be designed to meet or exceed local, state, and federal regulations involving storm flow, siltation, and erosion control. No part of the Redevelopment Site lies within designated flood zones or delineated wetlands. All parcels are currently developed with significant impervious surfaces. A large portion of the anticipated drainage runoff generated from the proposed Redevelopment Site will be equal to or less than the drainage runoff from the previous facilities. At this time, it is anticipated that stormwater will be handled predominately through underground detention systems.

4.0 DEVELOPMENT SCHEDULE

The Redevelopment Site will be developed in multiple phases with the intent of offering the Developer/Sponsor flexibility in terms of sequence and timing in constructing the various phases and uses. The master development of the sitework and infrastructure will occur initially. Temporary surface parking will be provided, as needed, to support the initial phase(s) of development until full build-out and structured parking is completed. A Final Development Plan will be provided to City Staff for review and compliance with the PD Regulating Plan as part of this PD application.

The projected timeline for construction of the various phases and uses is estimated as follows (subject to market conditions, financing via the capital markets, and other key factors):

- Start construction of master development of the sitework and infrastructure, along with Phase I MF Residential, by Q3 2022 with an estimated completion date of Q3 2024
- Start construction of Phase III MF Residential by Q3 2023 with an estimated completion date of Q1 2025
- Start construction of PH II Buildings A, B and C by Q2 2024 with an estimated completion date of Q4 2025



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5.0 DEVELOPMENT CONCEPT

The proposed Redevelopment Site will enhance and create a neighborhood village destination along the planned SRT greenway corridor. Commercial and residential uses will be placed along the streets and fronting the future Swamp Rabbit Trail Extension to help fully activate the public realm. To accommodate the desired future development, existing remaining parking, buildings, and site elements will be removed.

Multifamily Residential and/or Hotel – Phase I and Phase III

Phase I and Phase III of the project will consist of Multifamily Residential (apartments and/or condominiums) not to exceed 400 MF dwelling units at full build-out, and will include the flexibility of building hospitality up to 125 rooms/keys. The Developer/Sponsor requests flexibility to develop Phase I and Phase III Multifamily Residential in either one or two phases, comprised of multiple structures. As an example, the Developer/Sponsor would like the flexibility to develop Phase I and Phase III Multifamily Residential (including structured parking) plus Phase II structured parking in one phase. It is anticipated that Phase I will consist of the initial structure, associated amenities (including a connection to the future Swamp Rabbit Trail extension), Trailside Terrace commercial, and all necessary transportation facilities for access and circulation (including the main entry drive and access to/from Pleasantburg Dr.) It is anticipated that trash, deliveries, and other service activities will occur at a designated location at coordinated times within the parking structures.

The architecture of the residential buildings will continue the narrative of factory and industrial influence, with modernized, streamlined, and simplified detailing. Similar exterior materials shall be employed (brick, cementitious, metal) along with a mixture of storefront and residential doors and windows. In the spirit of industrial/modern architecture, a subdued color palette with warm accent materials and minimalist detailing will articulate the facades.

Architecture design standards will be generally consistent with city design guidelines and will meet or exceed the multifamily residential development standards set forth in Section 19-6.8 of the City's Code of Ordinances. The proposed building heights will not exceed 100 feet, as per building height definition in section 19-5 of the City of Greenville Ordinances. The Trailside Terrace commercial space is intended to consist of small shops fronting the future Swamp Rabbit Trail Extension which creatively utilize the grade differential from the Multifamily pool deck down to the trail. A local comparable example is Riverplace in Downtown Greenville; similar retail spaces are common along the Beltline in Atlanta. Since the majority of patrons will access the Trailside Terrace commercial space via the Swamp Rabbit Trail, vehicular spaces have not been dedicated to this use.

Hotel, Office, or Multifamily Residential – Phase II, Building A

As the anchor for Phase II, Building A will either be a hotel, an office building, or a multifamily residential building which incorporates structured parking. The ultimate use for this building will be determined based upon market conditions. Depending on the ultimate use, the building will either include hospitality up to 125 rooms/keys, up to 60,000 SF of additional office space, or up to 120 MF dwelling units. In all instances, structured parking will be connected to the building. It is anticipated that trash, deliveries, and other service activities will occur at a designated location which will be screened to blend harmoniously within the development.

In either scenario, the architectural intent will be to develop a street facing elevation that engages N. Pleasantburg Drive with architectural screening of the deck or habitable structure. The exhibits included herein illustrate the conceptual aesthetic.

Architecture design standards will be generally consistent with city design guidelines and will meet or exceed design standards for nonresidential development set forth in Section 19-6.5 of the City's Code of Ordinances. Regardless of the ultimate use, the proposed building heights will not exceed 100 feet, as per building height



**McCALL
CAPITAL**

definition in section 19-5 of the City of Greenville Ordinances.

Commercial (Restaurant / Retail / Office) – Phase II, Buildings B & C

This phase of the project will contain up to up to 80,000 SF of commercial space located within multiple buildings strategically located at the intersection of Pleasantburg/Laurens Road and Airport Road. This space will be a blend of restaurant, retail, and office uses as dictated by market conditions. The type of restaurant / retail uses envisioned for the project consist of supporting neighborhood retail shops and sit-down restaurants with indoor and outdoor café style seating. These may include restaurants and small markets (such as Dean & DeLuca, niche grocery, and the Swamp Rabbit Grocery), salons, and boutique retail shops. The proposed building heights will not exceed 100 feet, as per building height definition in section 19-5 of the City of Greenville Ordinances. Proposed retail sales and services uses will generally follow C-3 permitted uses found in Table 19-4.1-2: Table of Uses in the City's Code of Ordinances. Hours of operation shall be consistent with those outlined in the table of permitted uses.

These buildings are strategically positioned at the intersection of Pleasantburg/ Laurens Road and Airport Road to help anchor the gateway into downtown and to visually enhance the commercial corridor. Parking will generally be handled through structured parking, but a small amount of surface parking will be placed internal to the site. However, during construction of Phase I, temporary surface parking may be in the area of future Phase III for Phase I residents and/or guests in the event Phase III is not constructed in conjunction with Phase I. It is anticipated that trash, deliveries, and other service activities will occur at a designated location which will be screened to blend harmoniously within the development.

The architecture of the commercial buildings (Phase II) is in keeping with the urban location of the development featuring warehouse and industrial influences on structures with expansive storefronts allowing views into the buildings. Extensive use of brick will distinguish the building's exterior while the use of metal and cementitious cladding, unique detailing, and pedestrian friendly fixtures will serve to visually articulate the façade and activate the streetscape. Upper floors will continue this vocabulary, providing appropriate scale and massing. A plaza with outdoor seating will provide ample queuing from the building entry to the sidewalk zone and parking areas. Service access will be provided adjacent to the parking within the site's interior. Ridesharing (i.e., Uber and Lyft) will also be accommodated with a safe and convenient internal drop-off location near the plaza.

Architecture design standards will be generally consistent with City downtown design guidelines and will meet or exceed the nonresidential development standards set forth in Section 19-6.5 of the City's Code of Ordinances.

Landscape

Enhanced streetscape improvements will be included to create an aesthetically pleasing and safe streetscape for all users. While not technically located within the Downtown area, the streetscape will try to adhere to the spirit of the Greenville Downtown Design Guidelines and create an inviting and active pedestrian realm. Along Airport Rd. and Laurens Rd., a commercial corridor streetscape will include a 5' building transition zone, an 8' sidewalk zone, and a 6' planting zone. These spatial allocations which contribute to enhancing the public realm are also consistent with the Swamp Rabbit Trail Extension Master Plan. Along the N. Pleasantburg Dr. on-ramp, the existing 5' sidewalk will be removed and replaced with a 10' building transition zone, 6' sidewalk zone, and 5' planting zone which will create a much-improved public realm and more inviting streetscape.

Landscape and outdoor finishes at the commercial space will form an urban plaza at the entrance to the site, and will include street trees, site furnishings, pavers or other decorative paving, and pedestrian-scale outdoor lighting. A wide pedestrian cut-through will be provided between the two commercial buildings (Buildings B & C) at the corner of Airport Rd. and Pleasantburg/Laurens Rd. This space will be human scaled and inviting to accommodate pedestrian ingress/egress and provide an intimate environment for other pedestrian-oriented



**McCALL
CAPITAL**

activities.

Residential and hotel / office area landscaping will consist of street trees, outdoor lighting to match the surrounding residential streetscape, and foundation plantings at the units. Landscape and hardscape will be strategically used in conjunction with the building architecture to create an inviting, active, comfortable, and safe public realm. Buffers will be provided where needed to separate incompatible uses and screen undesired views. Buffers may consist of opaque, evergreen vegetation at minimum height of 6' at time of planting, opaque fencing or walls, 'living' fences, or any combination thereof.

Parking areas will be planted to meet City requirements, and emphasis will be placed on adding canopy trees to break up parking areas and reduce the urban heat island effect. Canopy tree plantings shall be diverse in nature and a mixture of native/naturalized species shall be used. Trees and landscaping will be planted along the main entry road to create a boulevard that is comfortable and functional to motorists, bicyclist, and pedestrians alike.

Sited strategically within the development will be designed open spaces that will act as passive park spaces. These locations will remain under the control and maintenance of the owner for the use and enjoyment of the residents living on-site, hotel guests / office tenants, and customers of the various commercial uses. In addition, improvements to the spaces may include benches, pathways, fencing and other passive elements that will help to improve the use and enjoyment of these spaces. The main entry into the site from Airport Rd. will serve as a "Main Street" for the development. The incorporation of green infrastructure, pedestrian plazas, and bicycle / pedestrian facilities will allow this area to serve both functionally and as a user amenity. The development will also be closely tied to the future Swamp Rabbit Trail. A multi-use trail connection is proposed which allows the "Main Street" to serve as a truly multi-modal connection to the residential and commercial areas, the Laurens Road / Airport Road corridor, and beyond. A transition zone from the new trail to the Redevelopment Site offers a unique opportunity for a potential future public / private partnership to provide an enhanced trail connection such that the site becomes a well-integrated amenity to the trail and vice versa.

All landscaping will meet or exceed the City requirements set forth in Section 19-6.2 of the City of Greenville ordinances.

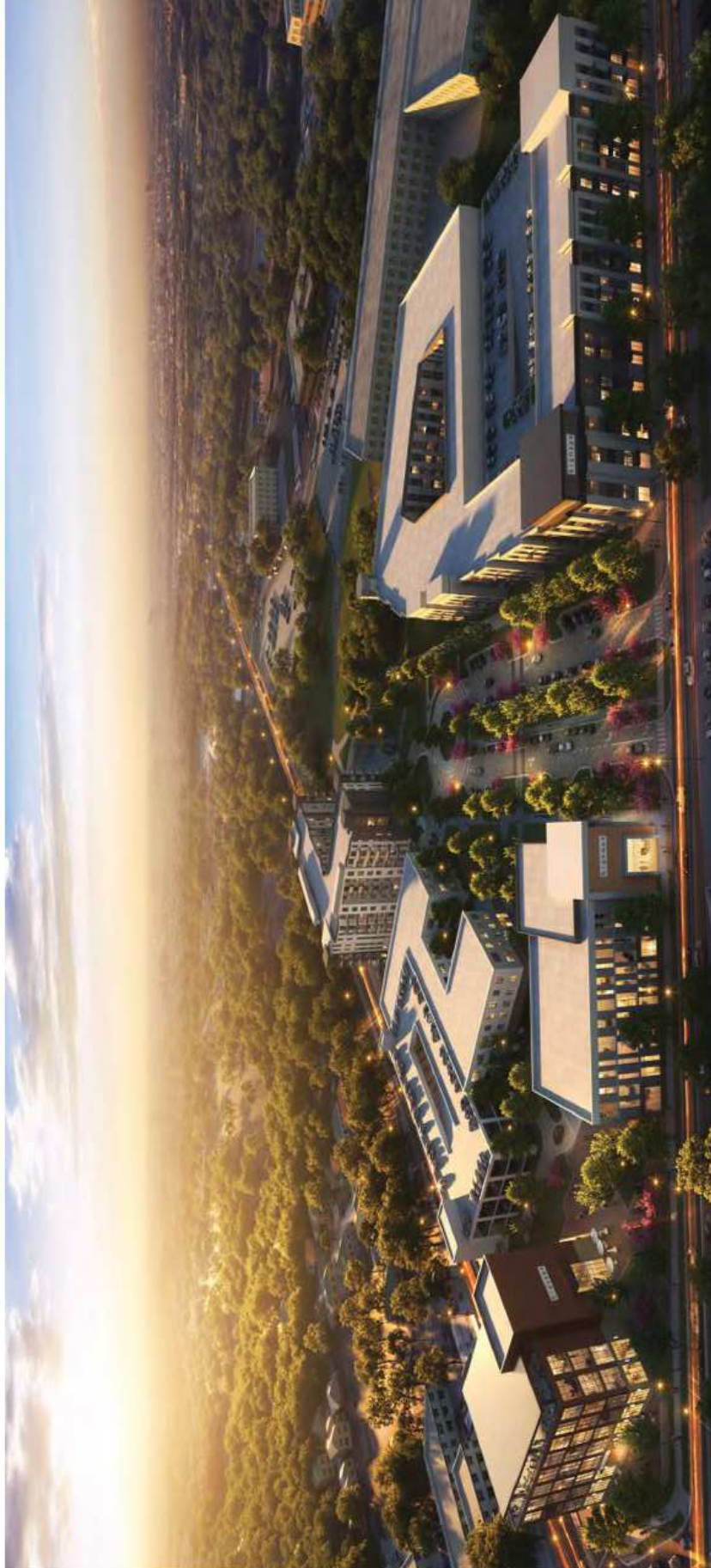
Signage

The Redevelopment Site is strategically located in a prominent, highly visible location which presents a tremendous marketing opportunity to showcase Enclave Laurens. The Developer will design and propose a comprehensive signage package to fully capture these marketing opportunities with a balance of tasteful quality design, and strategic placement of signs which are aesthetically pleasing, scaled appropriately, and integrated nicely with the surrounding buildings and landscape. It is anticipated that various signage types identifying the Redevelopment Site will be placed in several key locations to effectively market Enclave Laurens along N. Pleasantburg Drive, Laurens Road, and Airport Road, as well as the SRT greenway and internally within the community. All signage shall conform to the signage standards set forth in section 19-6.6 of the City of Greenville Ordinances.

Affordable Housing

The Developer/Sponsor will reserve up to 10% of the for-rent MF apartment units to be built within Enclave Laurens as affordable, income-restricted housing for residents earning up to 80% of Area Median Income in accordance with the guidelines outlined in the City of Greenville's Comprehensive Plan DECEMBER 2020 ("GVL2040"). Such affordable housing units will be professionally leased and managed in a manner consistent with the development's market-rate units and in accordance with applicable rules and law.

AERIAL RENDERING LOOKING NORTH



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



STREET LEVEL at PLEASANTBURG AND AIRPORT



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



CHARACTER IMAGERY

9



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021





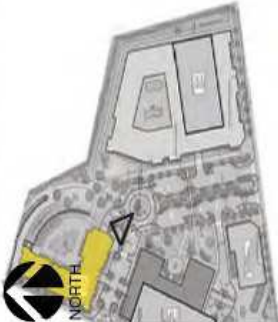
CHARACTER IMAGERY



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



BUILDING 1 CONCEPTUAL ELEVATION - SOUTH



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



2

BUILDING 1 CONCEPTUAL ELEVATION - WEST (N PLEASANTBURG DR)

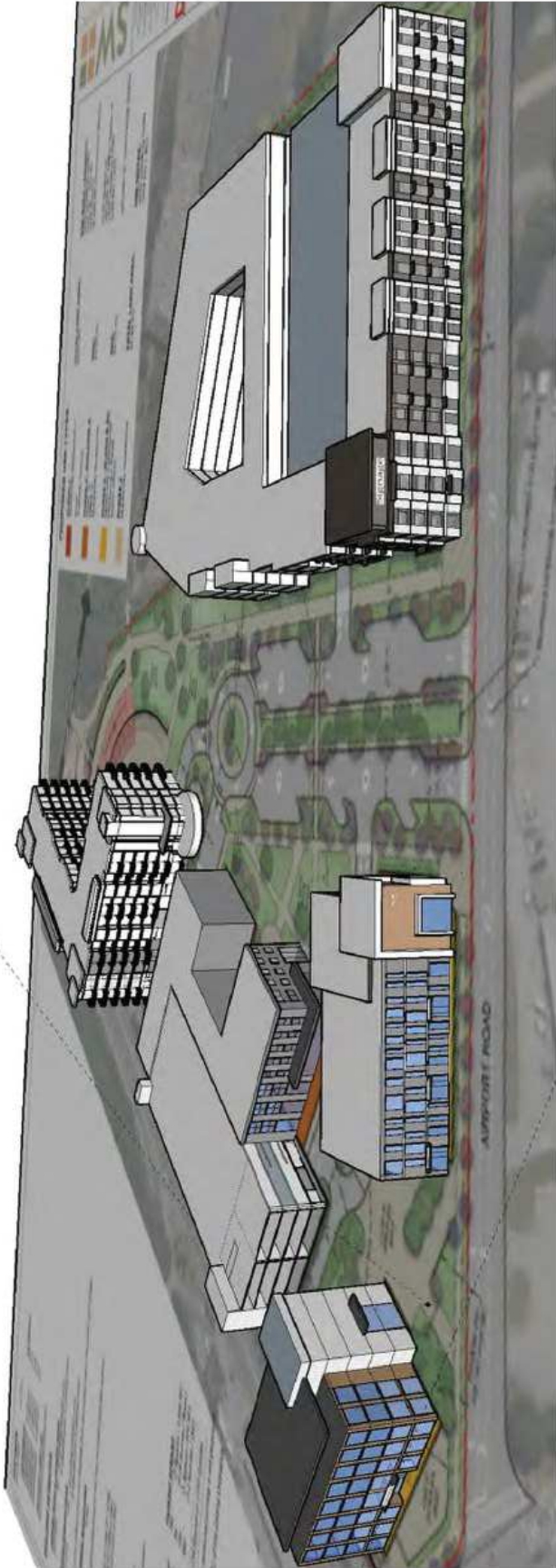


ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



MASSING STUDY - LOOKING NORTH

3



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



4

MASSING STUDY - LOOKING SOUTHEAST



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



5

MASSING STUDY - LOOKING WEST

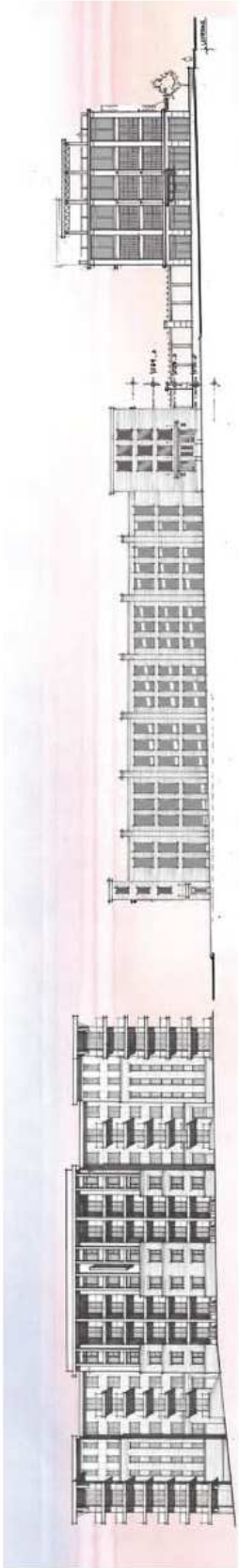
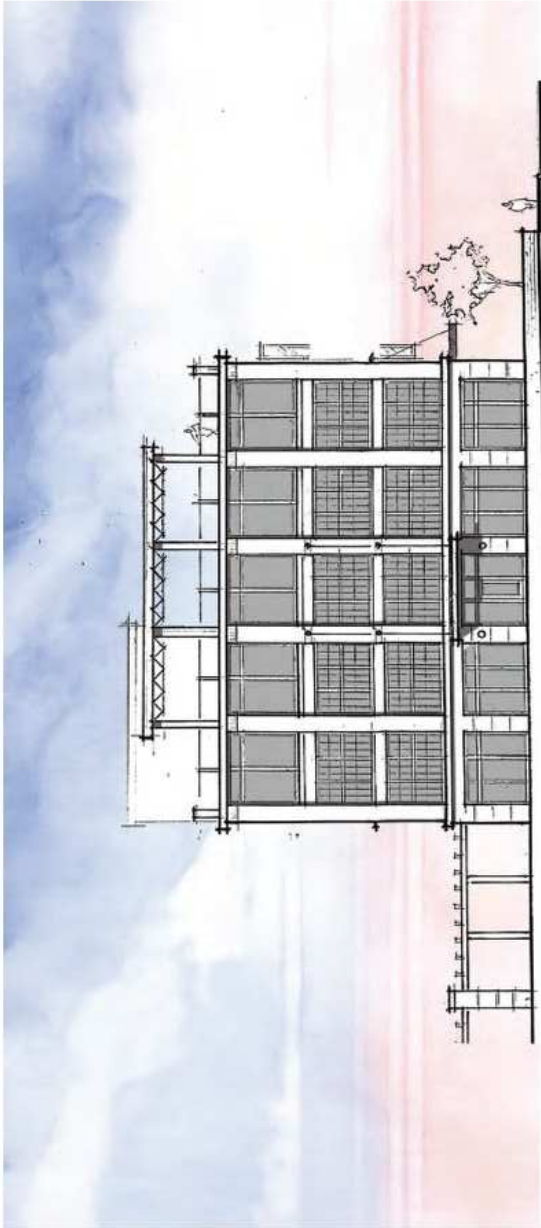


ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



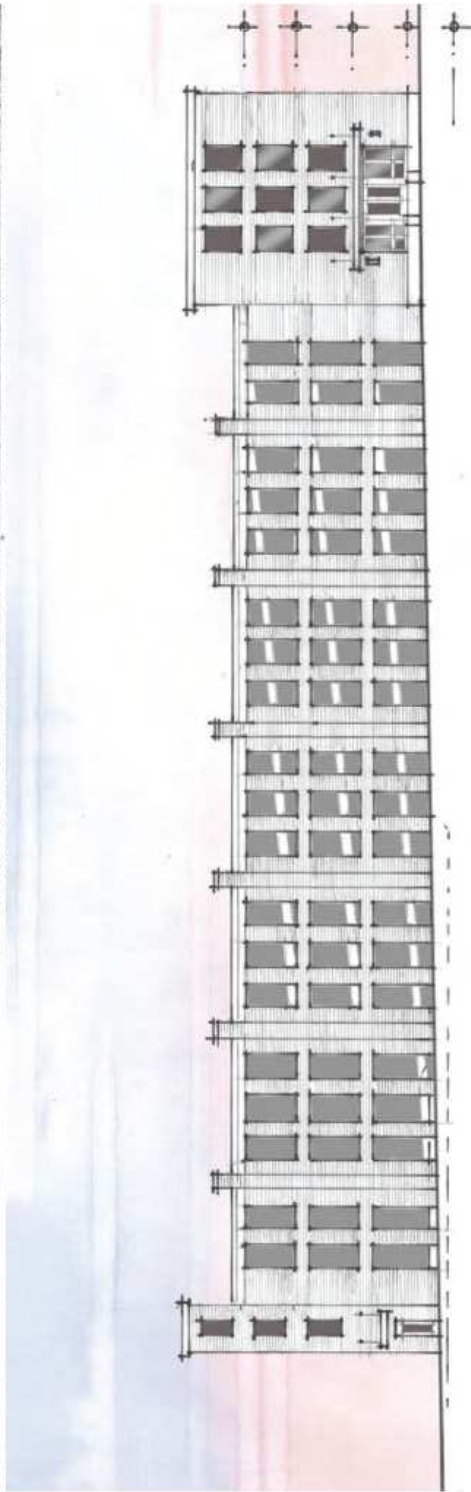
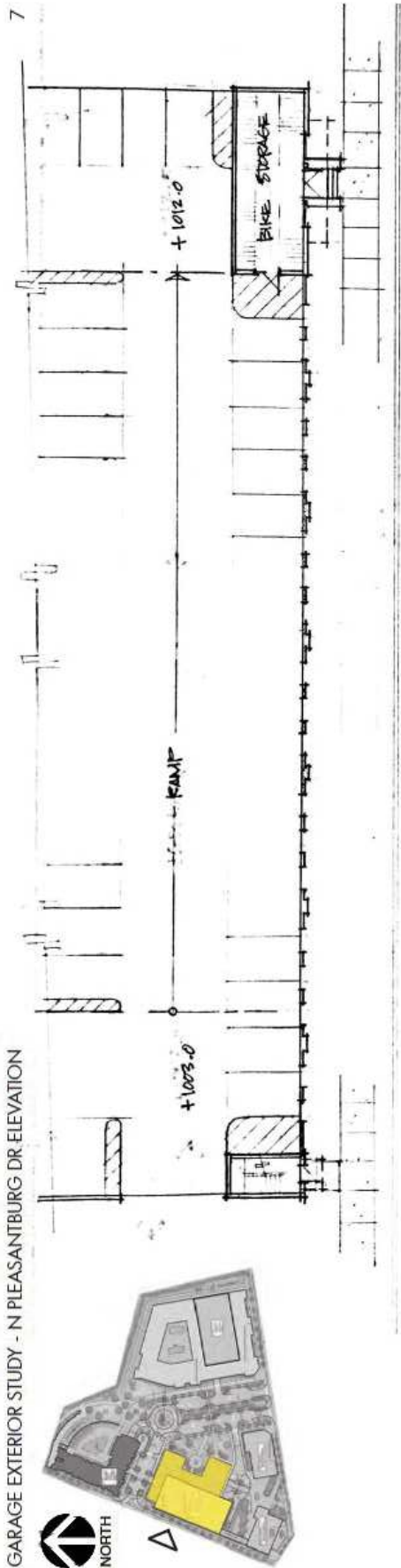
6

RETAIL/OFFICE EXTERIOR STUDY - N PLEASANTBURG DR ELEVATION



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021

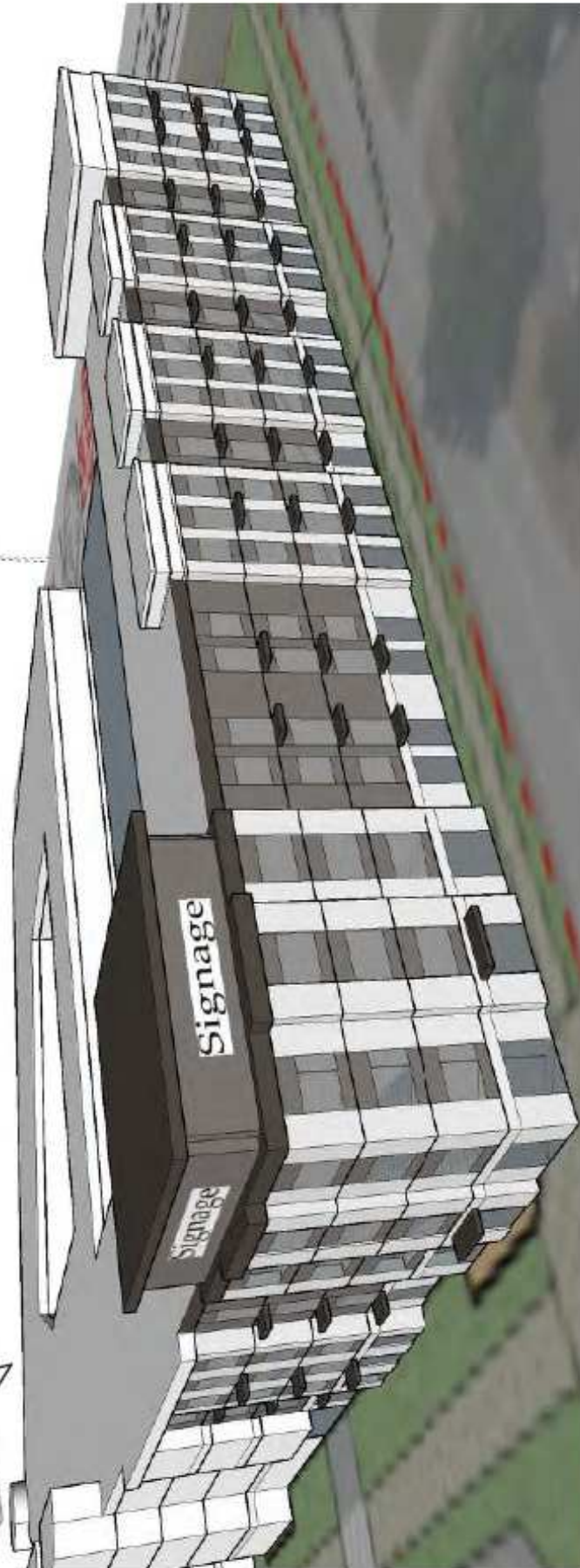




ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021



PHASE III CONCEPTUAL MASSING ELEVATION



ENCLAVE LAURENS
GREENVILLE, SC
OCTOBER 12, 2021





ENCLOVE LAURENS
MIXED USE DEVELOPMENT
IN
CITY OF GREENVILLE, SOUTH CAROLINA

[illegible]CONCEPTUAL
SITE
RENDERINGS

VIEW LOOKING SOUTH FROM SWAMP RABBIT TRAIL EXTENSION INTO THE SITE



VIEW OF OUTDOOR PLAZA SPACE AT PHASE II BUILDINGS



VIEW LOOKING NORTH ALONG ENTRY DRIVE FROM AIRPORT ROAD



VIEW LOOKING NORTH BETWEEN PHASE II BUILDINGS FROM AIRPORT ROAD







MOUNT PLEASANT, SC
863/266-1987

GREENVILLE, SC
864/388-0634

SUMMERVILLE, SC
843/672-0716

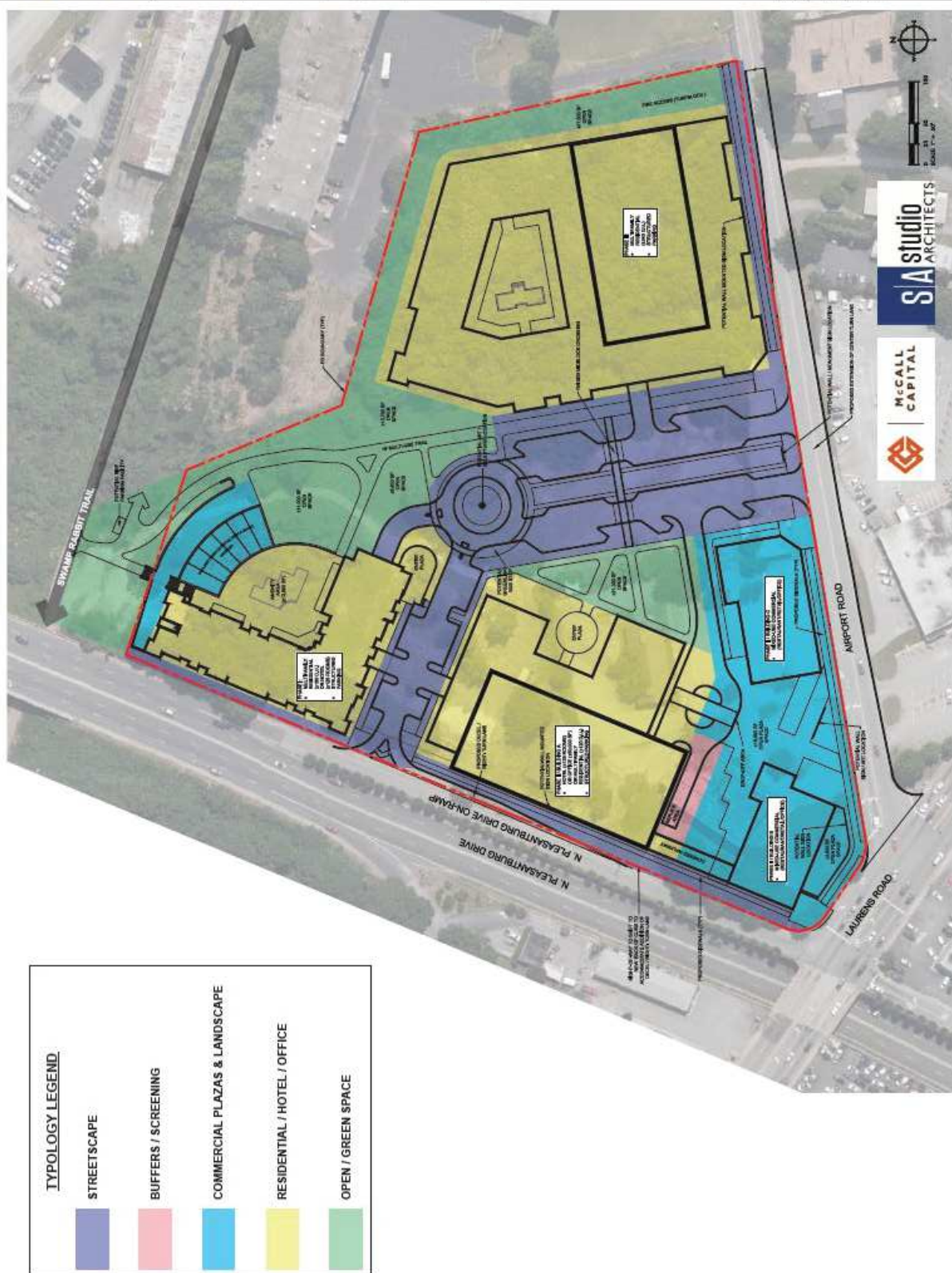
SPARTANBURG, SC
803/273-1272

CHARLOTTE, NC
863/372-5606

WYNNEBORO, CT
860/266-1200



ENCLAVE LAURENS
MIXED USE DEVELOPMENT
IN
CITY OF GREENVILLE, SOUTH CAROLINA

[illegible]LANDSCAPE
TYPOLOGIES

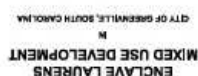


ENCLAVE LAURENS
MIXED USE DEVELOPMENT
IN
CITY OF GREENVILLE, SOUTH CAROLINA

[illegible]

STREETSCAPE, BUFFER / SCREENING, & OPEN / GREENSPACE



[illegible]

RESIDENTIAL / HOTEL / OFFICE





ENCLAVE LAURENS
MIXED USE DEVELOPMENT
IN
CITY OF GREENVILLE, SOUTH CAROLINA

REVISION HISTORY
NO. DATE DESCRIPTION
1 01/24/2022 PRELIMINARY
2 01/24/2022 REVISED
3 01/24/2022 REVISED
4 01/24/2022 REVISED
5 01/24/2022 REVISED
6 01/24/2022 REVISED
7 01/24/2022 REVISED
8 01/24/2022 REVISED
9 01/24/2022 REVISED
10 01/24/2022 REVISED

LANDSCAPE
TYPOLOGIES



COMMERCIAL PLAZAS & LANDSCAPES





GreenvilleWater

407 West Road Street • P.O. Box 607 Greenville, SC 29602 • 864.241.3115 tel • 864.241.3077 fax • www.greenvillewater.com

October 22, 2020

Seamon Whiteside
Attn: Mr. Will Buice
508 Rhett St., Suite #101
Greenville, SC 29601

Email: wbuice@SeamonWhiteside.com

RE: Tax Map #0256000600101, 0256000600102, & 0256000600100 – Airport Road

Dear Mr. Buice:

Greenville Water owns and maintains a 10-inch water line along Airport Road which is available to serve the properties referenced above in accordance with the Rules and Regulations of Greenville Water. Greenville Water also owns a 16-inch water line along Laurens Road which is available to #0256000600101 in accordance with the Rules and Regulations of Greenville Water.

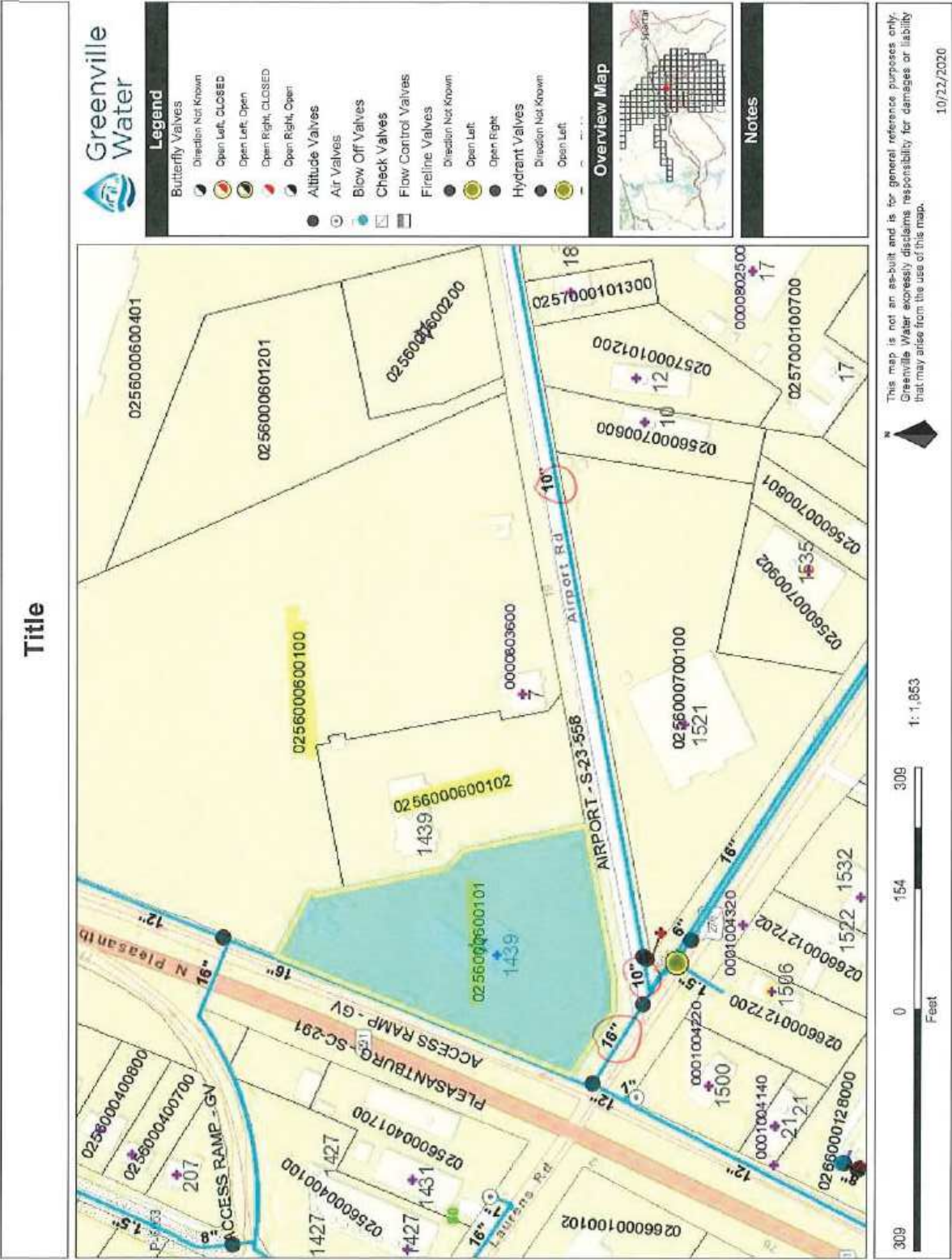
System improvements may be required at developer's expense depending on final unit/lot count, total water demands or fire flow requirements. A substantially complete set of plans and estimated total domestic and fire demand should be submitted to Greenville Water for review for final capacity determination.

Please see the attached map depicting the existing water lines in the area which has been enclosed for your convenience. Please note that tax map #0256000600101 is currently served by account #803900, and tax map #0256000600100 is currently served by account #803600.

Sincerely,
GREENVILLE WATER

Craig Sollman
Hydraulics Engineer

CS/d
Enclosure





October 26, 2020

Re: 1439 Laurens Rd Greenville SC-29607
Tax Map# 0256000600101, 0256000600102, 0256000600100

Mr. Marcus McCall
McCall Capital, LLC
531 S. Main Street, Suite 207
Greenville, SC 29601

In response to your request, natural gas is or can be made available to the above mentioned property in Greenville, South Carolina. Please have business owner contact me with specific natural gas needs (total connected BTU/CFH of natural gas equipment) to determine if any costs are applicable.

If I can be of further assistance to you, please do not hesitate to contact me. I may be reached at (864) 286-7900.

Thank You

PIEDMONT NATURAL GAS

Jay Lester
Commercial Sales
Greenville, South Carolina
(864) 286-7900
(864) 209-6202
Email: jay.lester@duke-energy.com



**Public Main Extension Preliminary
Capacity Request Form**
Form Revision Date 4/13/2018

Project Information

Project Name: Midtown Date: 9/20/19

Engineer (Company): Seamon Whiteside Phone: 864-330-0534

Engineer (Contact): Joe Bryant, PE Signature: [Signature]

Engineer Address: 508 Rhett Street, Suite 110 Email: jrbryant@seamonwhiteside.com

Developer (Company): McCall Capital LLC Phone: 864-370-0037

Developer (Contact): Marcus McCall Email: _____

Developer Address: 531 S. Main Street, Suite 207, Greenville, SC 29601

Tax Map Numbers for Project: 0256000600-(100)(101)(102)

Proposed Water Resource Recovery Facility: Mauldin Road WWTP

Estimated Total Sewer Flow: 119,414 gal/day. Attach Flow Calculations (Average daily flow is calculated using SCDHEC Unit Cost history loadings)

Connection Type - ☒ Gravity ☐ Force Main Connection Point - ☒ Satellite Sewer MH ☐ ReWa MH

Attach map identifying proposed connection point to existing collection/trunk sewer Existing flow-653 GPD

New Flow-119,414 GPD-653 GPD=110,761 GPD

Are Multiple Collection Agencies involved? ☐ Yes ☒ No If yes, both agencies will need to fill out the respective portions of the form below

Ownership, Operation & Maintenance of Collection System will be assigned to City of Greenville

Will there be a new Pump Station associated with this development? ☐ Yes ☒ No

Primary Satellite Sewer Agency Preliminary ApprovalAgency Name: City of Greenville

Does capacity appear to be available to serve this project? ☒ Yes ☐ No Approved Connection Point? ☒ Yes ☐ No

Comments: Replaces all previous flow approval. Valid for five years 10/1/19

to MH51581 Flow may be reduced to actual construction.

Collection Agency Signature: [Signature]Date: 9/24/19**Secondary (Transport) Sewer Agency Preliminary Approval**

Agency Name: _____

Does capacity appear to be available to serve this project? ☐ Yes ☐ No

Comments: _____

Collection Agency Signature: _____

Date: _____

ReWa Preliminary Approval☒ ReWa has verified all affected agencies have completed review formReWa Project No: PME2019-171Does ReWa capacity appear to be available to serve this project? ☒ Yes ☐ NoApproved Connection Point? ☒ Yes ☐ NoIs project authorized to move to the Step 2 permitting process? ☒ Yes ☐ NoReWa Pretreatment form attached? ☒ Yes ☐ N/A

Comments: _____

ReWa Representative: [Signature]Date: 10/04/19

This form does not constitute a permit to connect from ReWa or any sanitary sewer agency, nor is it to be used to obtain building permits from any regulatory agency. In cases where capacity appears available to serve a project, such capacity can neither be guaranteed nor reserved by this preliminary approval. Capacity is allocated on a first come first serve basis during the subsequent ReWa Capacity Approval Process (Step 2). Upon meeting all requirements (plan review and approval, payment of all applicable fees, etc.), ReWa will issue a separate letter for use in obtaining a SCDHEC Permit to Construct. The engineer shall contact the individual Satellite Sewer Agencies involved to determine their policies, procedures, and requirements. Note: Approval is valid for 24 months from the executed date of this document.



October 26, 2020

McCall Capital
Attn: Marcus McCall
531 S. Main St.
Greenville, SC 29601

RE: New Greenville Project

Dear Marcus McCall,

Your new multifamily housing project, located between Laurens Rd and Airport Rd, Greenville SC 29607 with the tax map number #'s 0256000600101, 0256000600102, and 0256000600100 is in Spectrum's footprint for video, internet and voice services. Absent of any unforeseeable adverse circumstances or conditions including any force majeure events outside of Spectrum's control, and upon completion of a mutually agreed upon Service Agreement, Spectrum will be able to extend its plant to provide service to your project.

We will need to work with your representatives on an Access Agreement, for your project. We will need this Agreement executed prior to Spectrum beginning our construction phase for the project.

Not a Binding Obligation. THIS LETTER OF INTENT DOES NOT CONSTITUTE OR CREATE, AND SHALL NOT BE DEEMED TO CONSTITUTE OR CREATE, ANY LEGALLY BINDING OR ENFORCEABLE OBLIGATION ON THE PART OF EITHER PARTY TO THIS LETTER OF INTENT. NO SUCH OBLIGATION SHALL BE CREATED, EXCEPT BY THE EXECUTION AND DELIVERY OF THE ACCESS AGREEMENT CONTAINING SUCH TERMS AND CONDITIONS OF THE PROPOSED TRANSACTIONS AS SHALL BE AGREED UPON BY THE PARTIES, AND THEN ONLY IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SUCH ACCESS AGREEMENT.

Feel free to contact me if you have any questions.

Sincerely,

Sharon Collins

Sharon Collins | Sr. Account Executive, Spectrum Community Solutions | 864.887-7231
1511 S. Batesville Rd | Greer, SC 29650 | www.charter.com/ndu

TRAFFIC IMPACT AND ACCESS STUDY

MIDTOWN VILLAGE GREENVILLE, SC

Prepared for:

MCCALL CAPITAL
531 S. Main Street, Suite 207
Greenville, SC 29061

Prepared by:

RIDGEWAY TRAFFIC CONSULTING, LLC
1720 Dutch Fork Road, Suite F
Immo, SC 29063



RIDGEWAY
TRAFFIC CONSULTING
803-361-9044

SUBMITTED AUGUST 2021

PROJECT DESCRIPTION & EXISTING CONDITIONS

Ridgeway Traffic Consulting (RTC) has been retained to evaluate the traffic and transportation impacts resulting from the construction/occupancy of a new mixed-use development to be known as Midtown Village which is generally located north of Laurens Road, between Pleasantburg Drive and Airport Road, within the City Limits of Greenville, South Carolina. It should be noted that this project was previously known as Laurens Station and was studied in 2019. This report has been updated for revised densities.

Evaluation of the transportation impacts associated with the proposed project first requires a thorough description and quantification of the proposed project and the project site, which is included in the following sections.

PROJECT DESCRIPTION

The project proposal is to construct a new mixed-use project consisting of multi-family residential, small-scale retail (shops), restaurant space, office space, and a hotel. The project site, which is approximately 12.6-acres in size, is currently unoccupied, but previously was occupied by SCDOT District 3 offices. The following densities are currently proposed:

- 400 Multi-Family Residential Units;
- 30,000 square-feet (sf) of small-scale retail (shops);
- 10,000 sf of restaurant space;
- 40,000 sf of office space; and
- a 125-room hotel.

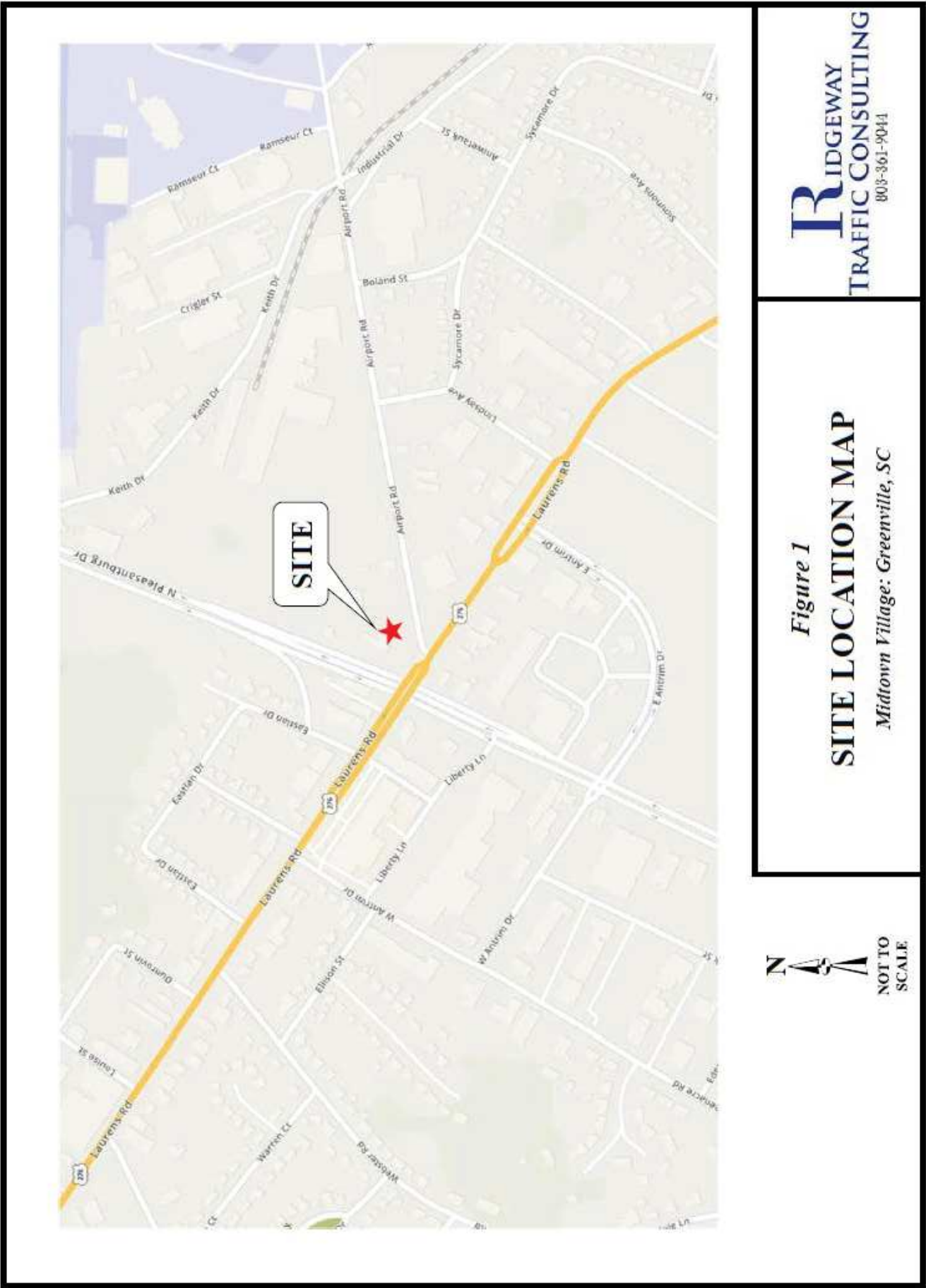
Access for the development is proposed via one full-movement connection (boulevard with median) to Airport Road, and a restricted connection to the Pleasantburg Drive northbound on-ramp that will by default be limited to right-in/right-out operations due to the one-way operations of the ramp. The access to Airport Road will replace three existing full-movement access drives along this frontage. Specific recommendations regarding each access point are provided in the Mitigation section of this report.

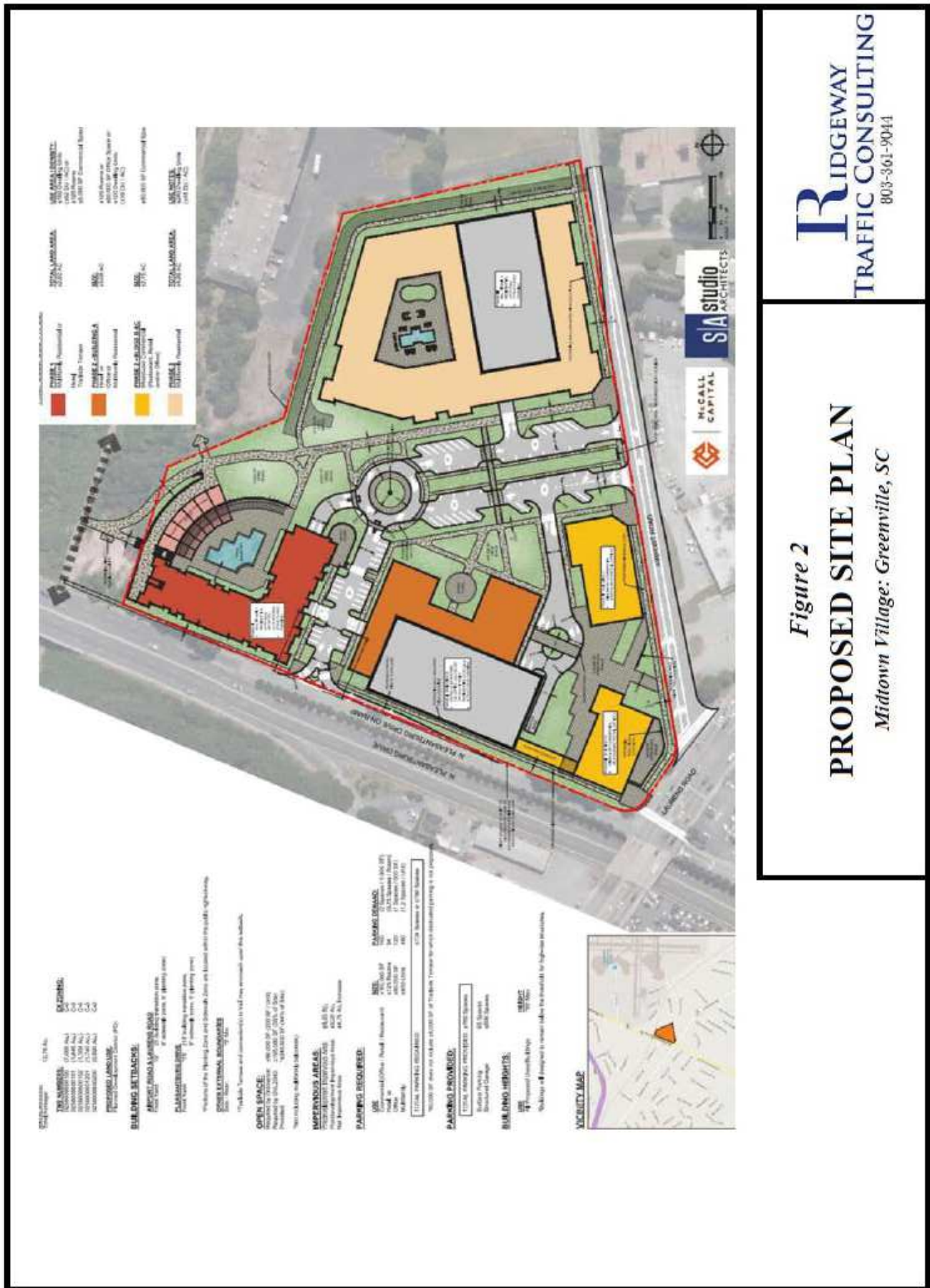
Under the current development plan, the project is anticipated to be constructed and operational by 2024 and therefore a 2025 horizon year has been analyzed for this report (Build PLUS 1 Year). **Figure 1** depicts the site location in relation to the local and regional roadway system. **Figure 2** depicts the development plan as currently proposed.

GEOMETRICS AND TRAFFIC CONTROL

A comprehensive field inventory of the site and study area has been conducted. The field inventory included a collection of geometric data, traffic volumes, and traffic control within the study area. The study area for this project consists of the following intersections:

- Laurens Road at Eastlan Drive/Shoppers Drive;
- Laurens Road at Pleasantburg Drive Northbound Access Ramps; and
- Laurens Road at Airport Road.



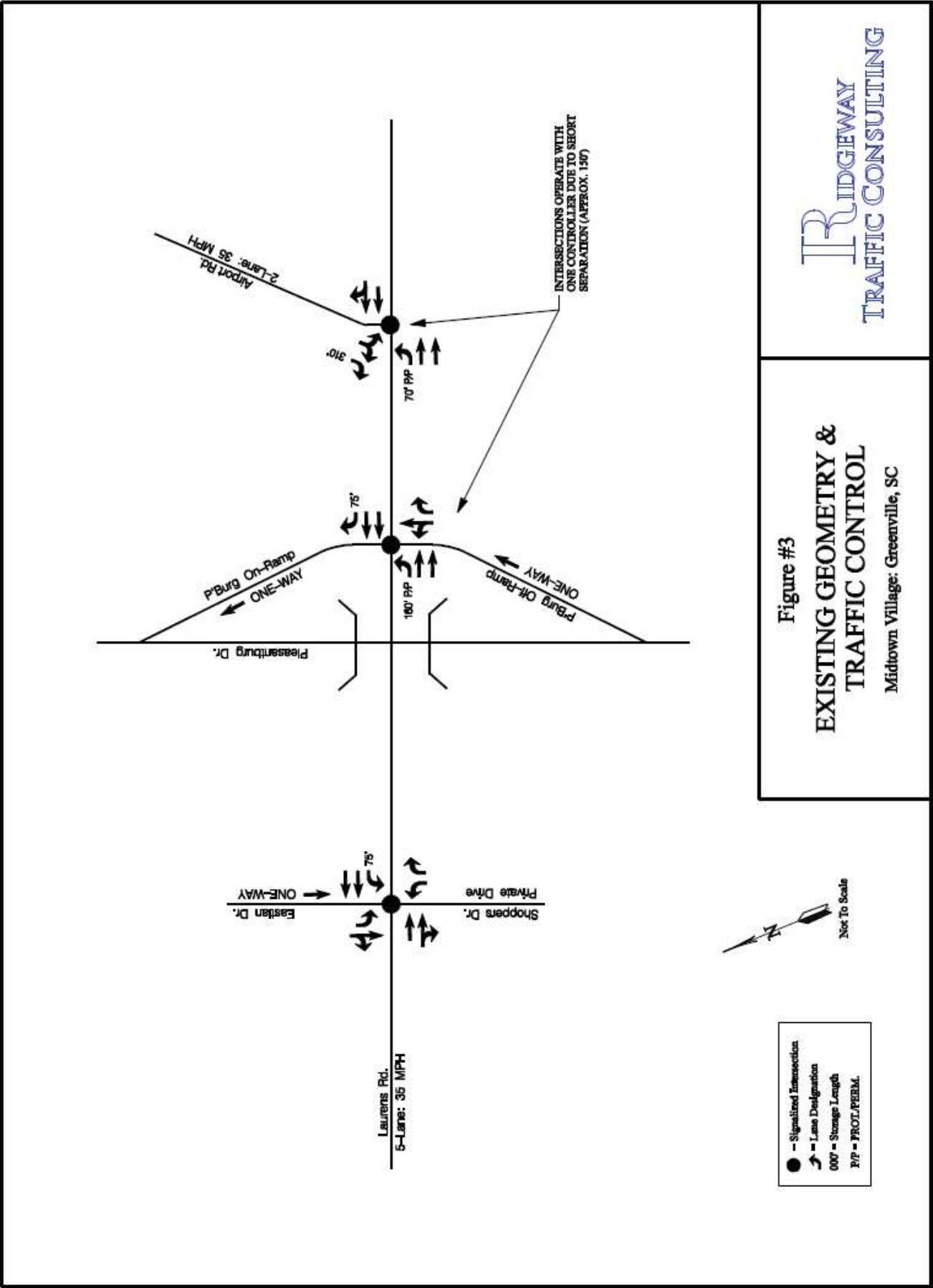


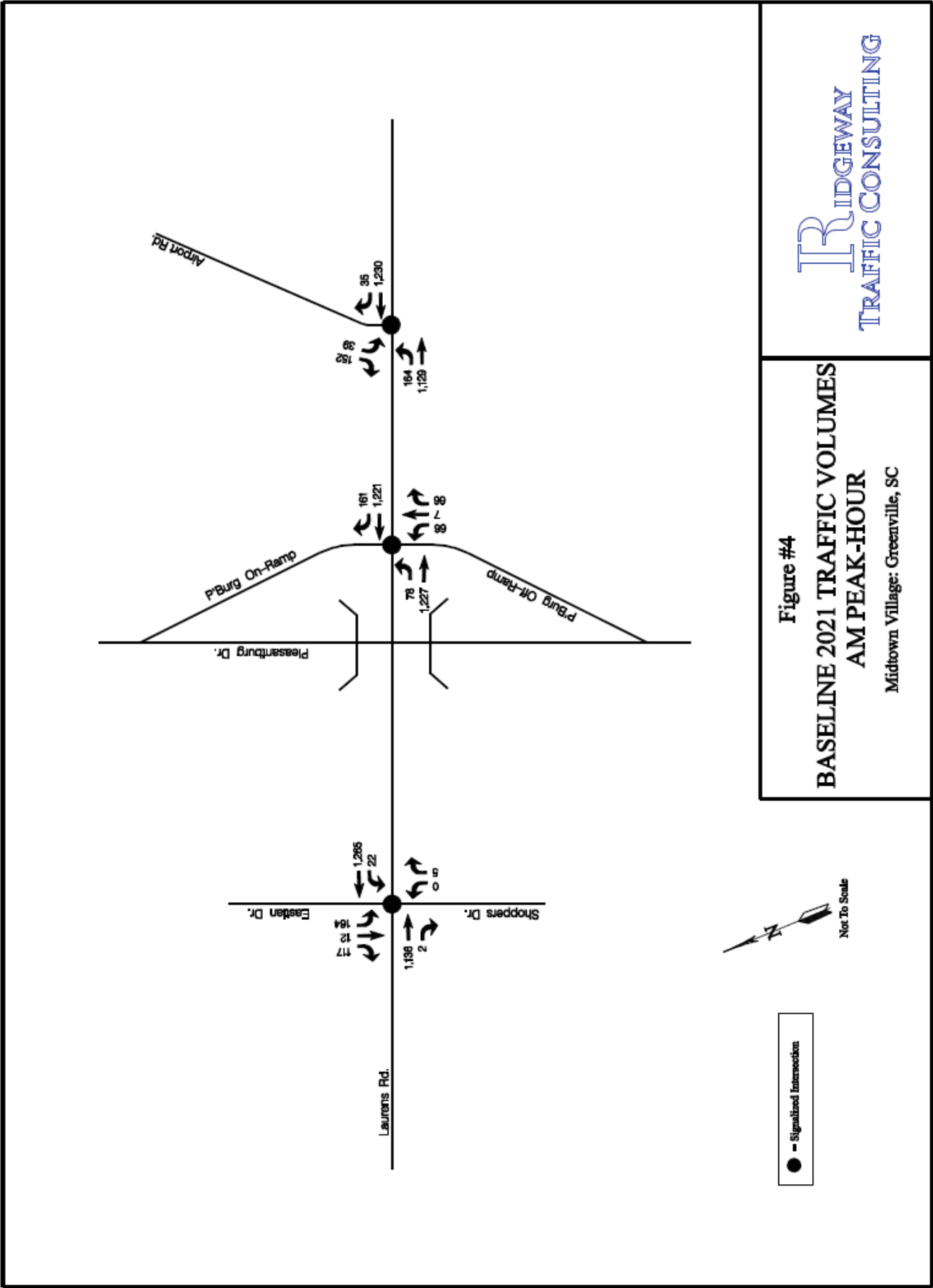
The existing lane geometrics and traffic control characteristics for the study area roadways/intersections are graphically depicted in Figure 3.

TRAFFIC VOLUMES

In order to determine the existing traffic volume flow patterns within the study area, manual turning movement counts were gathered for the weekday morning (7:00-9:00 AM) and evening (4:00 – 6:00 PM) peak time periods for the study area intersections. Based on discussions with the City of Greenville, counts from the Fall of 2019 have been increased at an annual rate of 3-percent for two years to reflect baseline 2021 Existing Conditions.

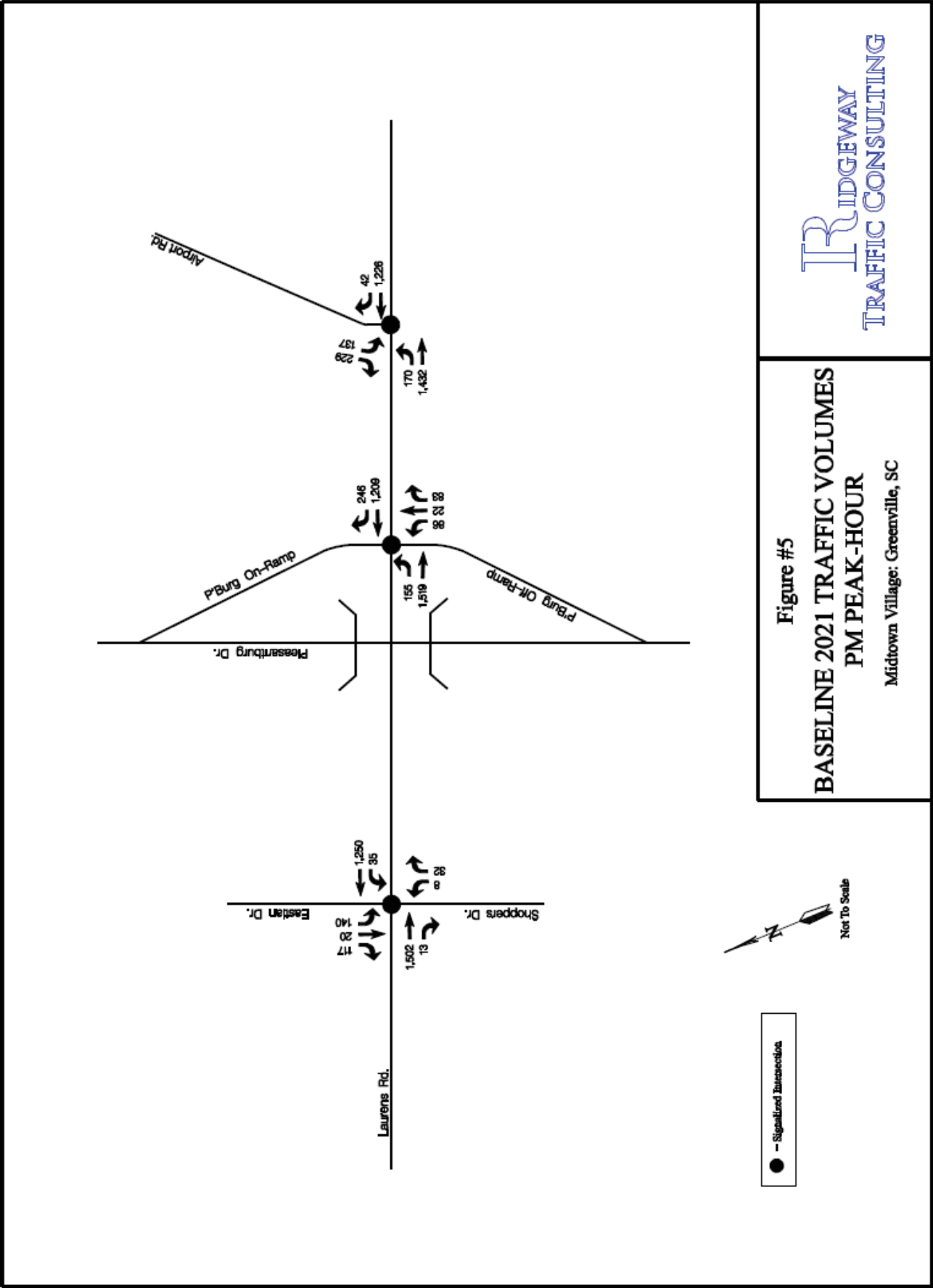
The existing baseline (2021) peak-hour traffic flow networks for the weekday AM and PM peak-hour periods are shown graphically in Figures 4 & 5. Count data sheets are provided in the Appendix of this report for all intersections.





IR RIDGEWAY
TRAFFIC CONSULTING

Figure #4
BASELINE 2021 TRAFFIC VOLUMES
AM PEAK-HOUR
Midtown Village: Greenville, SC



TRIDGEWAY
TRAFFIC CONSULTING

Figure #5
BASELINE 2021 TRAFFIC VOLUMES
PM PEAK-HOUR
Midtown Village: Greenville, SC



● - Signalized Intersection

PROBABLE IMPACTS OF THE PROJECT

To estimate the impact of site-generated traffic volumes on the roadway network under Future conditions, Existing traffic volumes in the study area were projected to the Year 2025, which is the horizon year analyzed for this report. Traffic volumes on the roadway network at this time will include all existing traffic, any new traffic due to normal traffic growth, and any traffic related to specific developments that are presently approved and expected to be completed by 2025 (in excess of normal traffic volume growth). Consideration of these factors resulted in the development of 2025 No-Build traffic volumes. Anticipated site-generated traffic volumes were then super-imposed upon the 2025 No-Build traffic flow networks to reflect 2025 Build conditions including the proposed development.

BACKGROUND TRAFFIC GROWTH

Traffic growth on area roadways is a function of the expected land development both within the immediate area as well as the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed identifies the location and type of approved/permitted development. This produces a realistic estimate of growth for local traffic. However, the drawback of this procedure is that the potential growth in population and traffic growth external to the study area would not be accounted for in the traffic projections.

An alternative procedure estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning movement volumes may be growing at either a higher or lower rate at particular intersections. To provide a conservative analysis framework, both procedures have been applied.

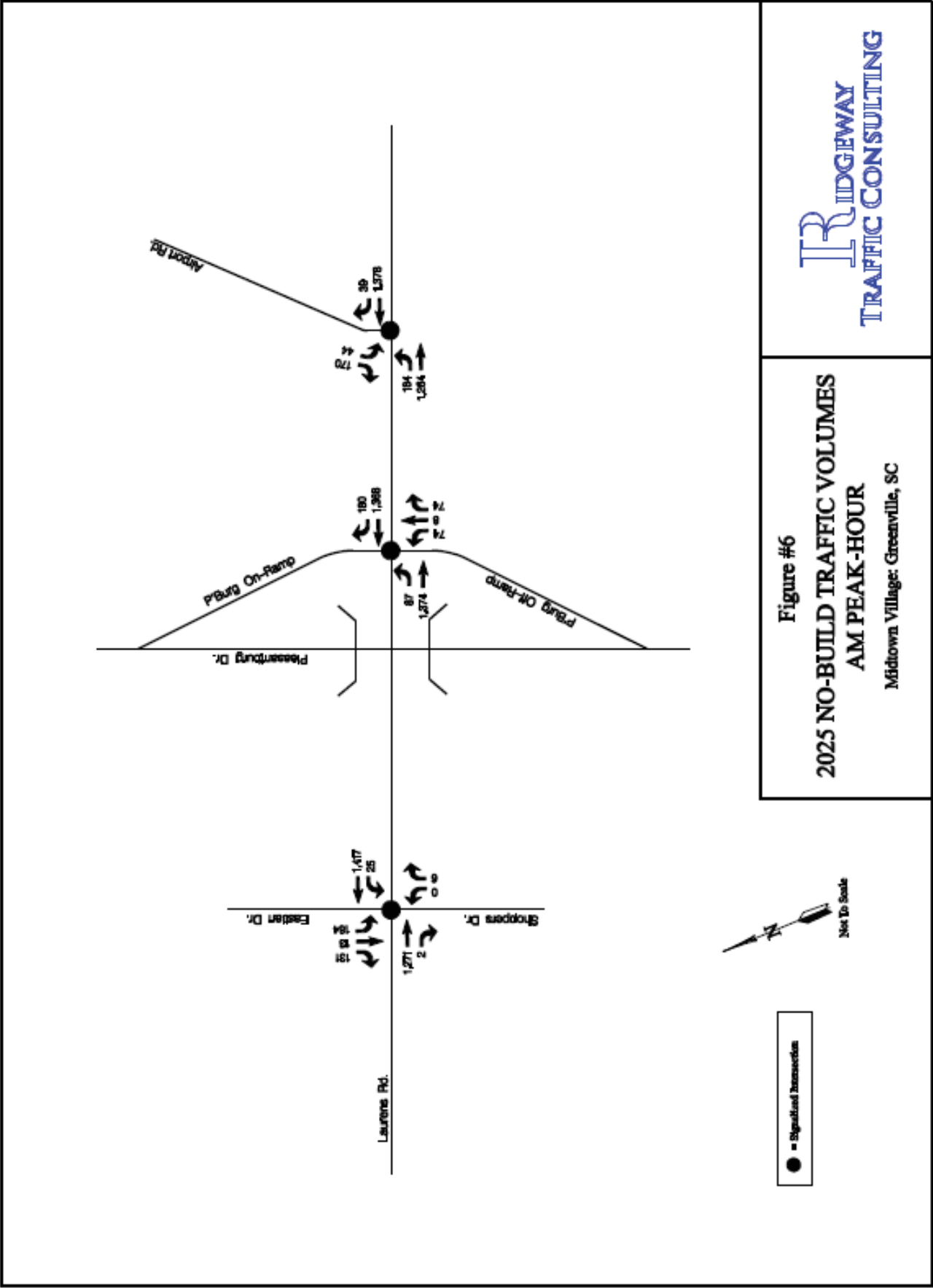
Specific Development

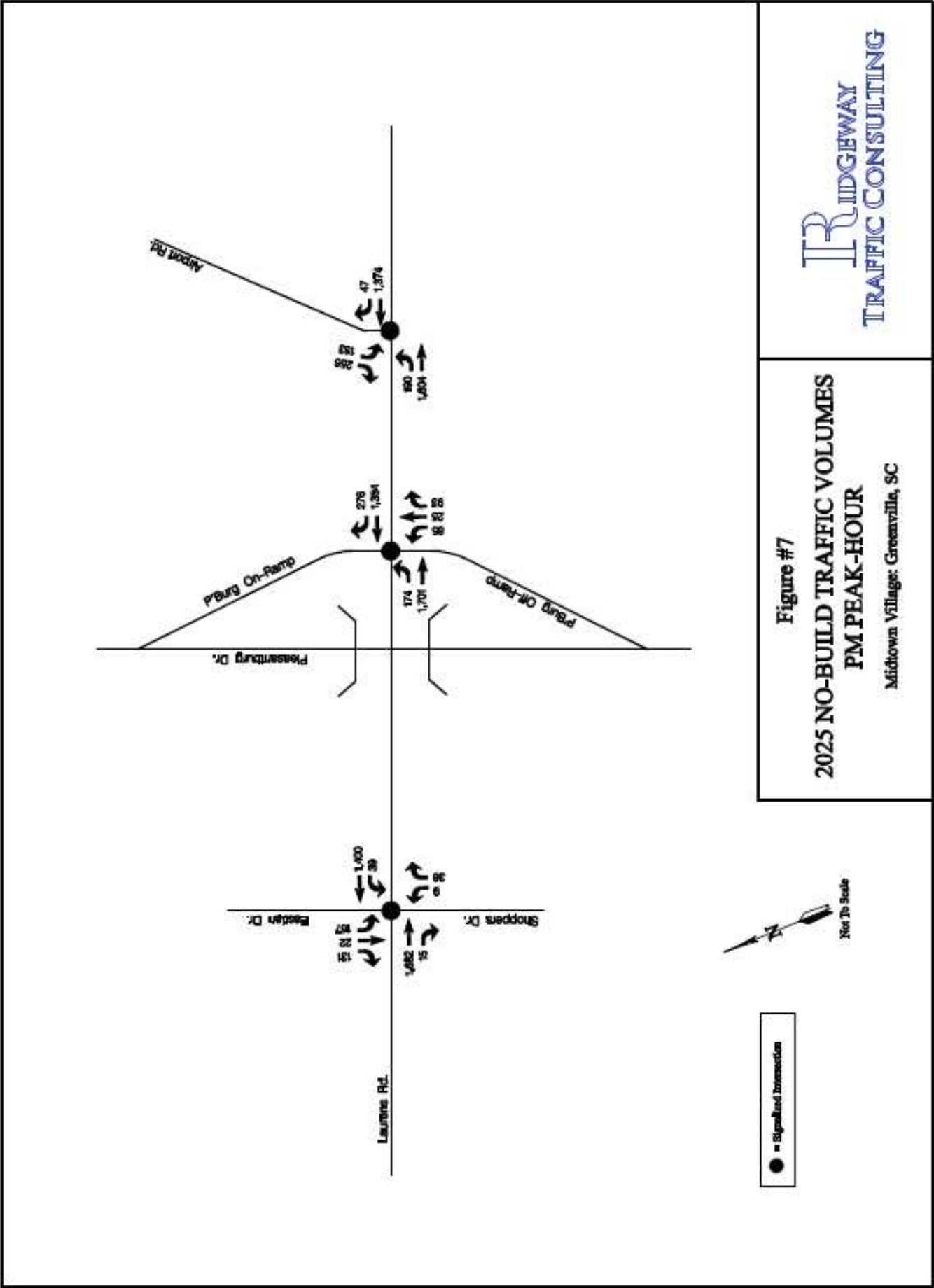
No specific background developments were identified for inclusion in future No-Build traffic volumes.

Annual Growth

A review of historical SCDOT traffic volumes along Laurens Road (Station #165) and Airport Road (Station #758) indicates that traffic growth has been moderate over the past five years of reported data. Growth has been greater along Laurens Road with a 2015 reported volume of 22,000 vpd and a 2019 reported volume of 26,000. Growth has been less along Airport Road with a 2015 reported volume of 3,900 vpd and a 2019 reported volume of 4,100 vpd. Based on averaging of growth rates for both stations, an annual growth rate of 3-percent was developed and utilized for this report.

The anticipated 2025 No-Build AM and PM peak-hour traffic volumes, which include the 3-percent annual growth rate, are graphically depicted in Figures 6 & 7 for the AM and PM peak hours.





PLANNED ROADWAY IMPROVEMENTS

There are no roadway improvement projects that are anticipated to be completed within the study area by the time the project is expected to be completed.

SITE-GENERATED TRAFFIC

Traffic volumes generated by the development were forecasted using the Tenth Edition of the Institute of Transportation Engineers (ITE) *Trip Generation Manual*¹. Table 1 summarizes the anticipated trip generation characteristics for the project.

Table 1
PROJECT TRIP GENERATION SUMMARY¹
Midtown Village – Greenville, SC

Time Period	Multi-Family Residential 400 Units ² (a)	30,000 SF Retail/Shops ³ (b)	10,000 SF Restaurant Space ⁴ (c)	40,000 SF General Office ⁵ (d)	125 Room Hotel ⁶ (e)	Total Trips (a+b+c+d+e)	Internal Capture ⁷ (f)	Total External Trips (a+b+c+d+e-f)
AM Peak-Hour								
Enter	34	17	-	40	34	125	(9)	116
Exit	92	11	-	6	23	139	(29)	130
Total	133	28	-	46	57	264	(18)	246
PM Peak-Hour								
Enter	102	55	61	7	35	260	(92)	168
Exit	66	29	27	29	21	234	(92)	142
Total	168	114	98	46	68	494	(184)	310

¹ITE Trip Generation Manual, Tenth Edition.

²ITE Trip Generation Manual - LUC 221 - Multi-Family Housing Mid Rise.

³ITE Trip Generation Manual - LUC 820 - Shopping Center. Rate Used due to small square footage.

⁴ITE Trip Generation Manual - LUC 932 - High-Turnover Sit-Down Restaurant. Not open during AM peak.

⁵ITE Trip Generation Manual - LUC 710 - General Office.

⁶ITE Trip Generation Manual - LUC 310 - Hotel.

⁷Internal Capture based on NCHRP 684 Estimation Tool.

As shown, this development as a whole can be expected to generate a total of 264 trips (125 entering, 139 exiting) during the AM peak-hour. During the PM peak-hour, a total of 494 trips (260 entering, 234 exiting) are expected.

Due to the mix of uses on site, internal capture calculations have been completed based on NCHRP 684 guidelines. Internal capture is estimated to be low during the AM peak hour when the restaurant space is not open, and the retail activity is low. Internal capture is expected to be more significant during the PM period when the restaurant is open and retail activity is more pronounced. After accounting for the calculated internal capture (spreadsheets provided in the Appendix), the project can be expected to generate a total of 246 external trips (116 entering, 130 exiting) during the AM peak-hour. During the PM peak-hour, 310 external trips (168 entering, 142 exiting) are expected.

¹ *Trip Generation*, Tenth Edition; Institute of Transportation Engineers; Washington, DC.

TRIP DISTRIBUTION

The directional distribution of site-generated traffic on the study area roadways was based on an evaluation of existing travel patterns within the study area during each of the studied peak hours. Table 2 depicts the trip distribution pattern used for this project.

Table 2
TRIP DISTRIBUTION SUMMARY
Midtown Village – Greenville, SC

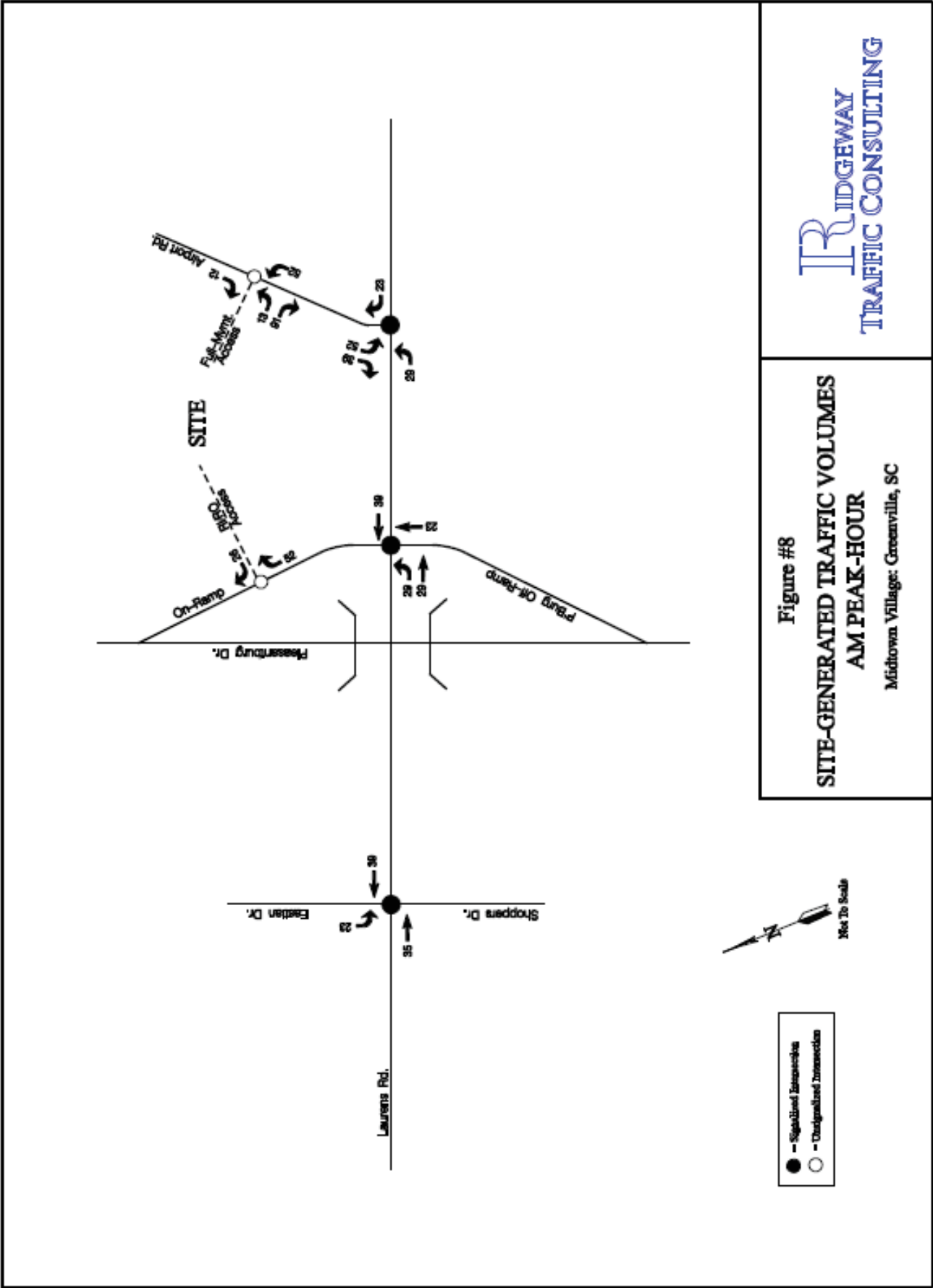
Roadways	Direction To/From	Percent Enter/Exit
Laurens Road	West (Downtown)	30
	East	20
Pleasantburg Drive	North	20
	South	20
Airport Road	North/East	10
Total		100

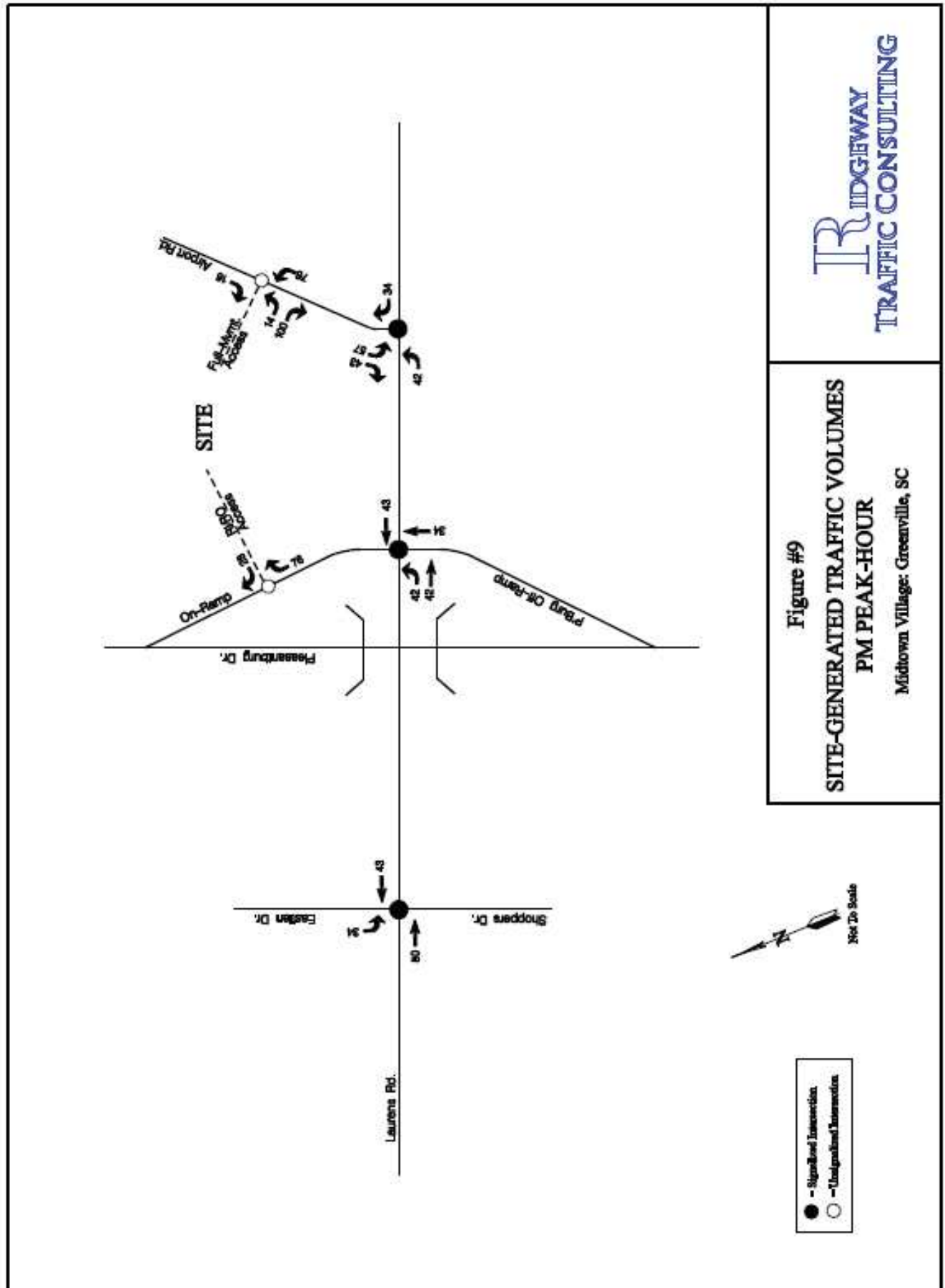
Note: Based on the existing traffic patterns.

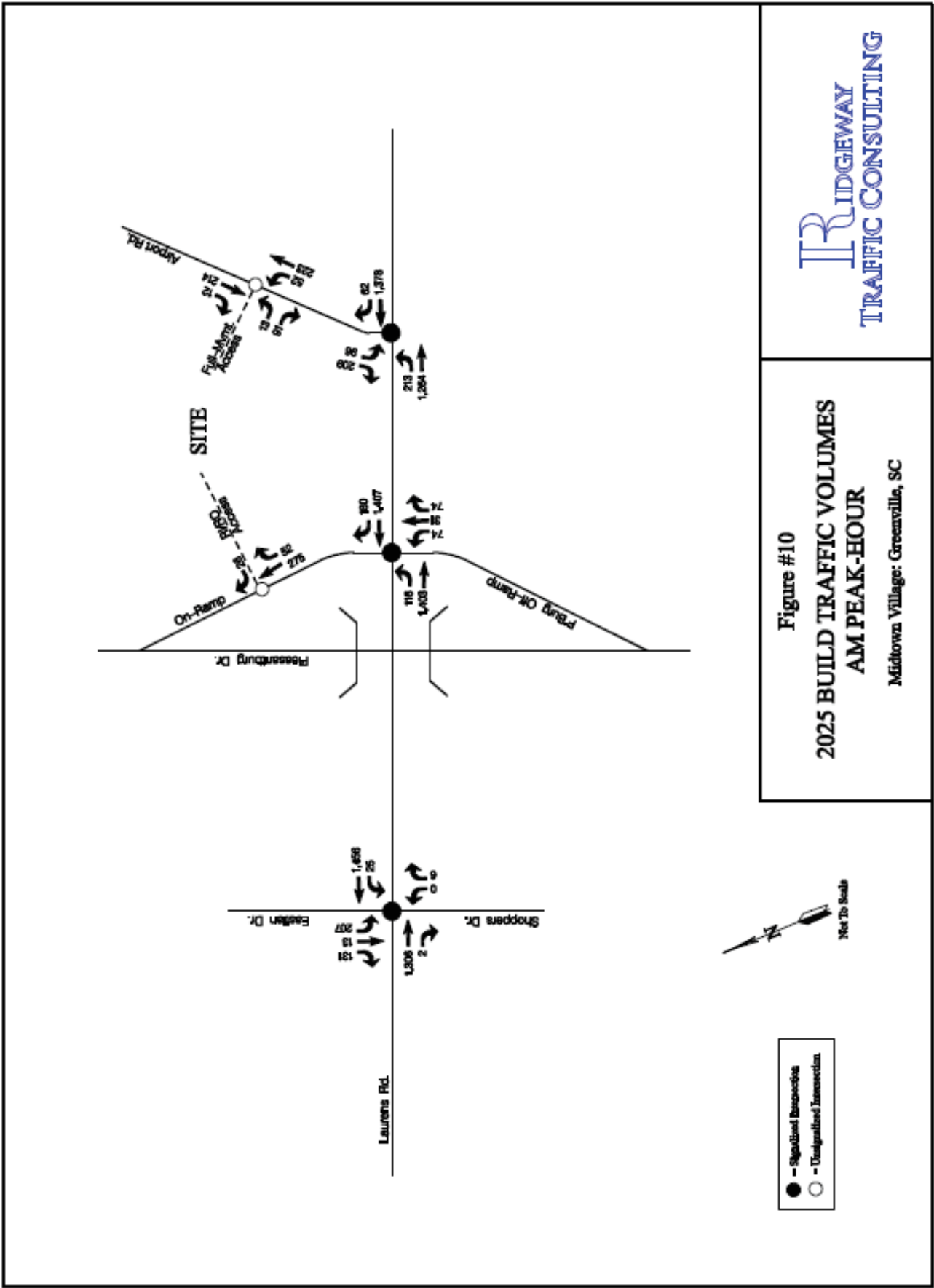
The site-generated traffic presented in Table 1 has been distributed within the study area roadway network as shown by the distribution pattern shown in Table 2. The site-generated traffic volumes depicted graphically in Figures 8 & 9.

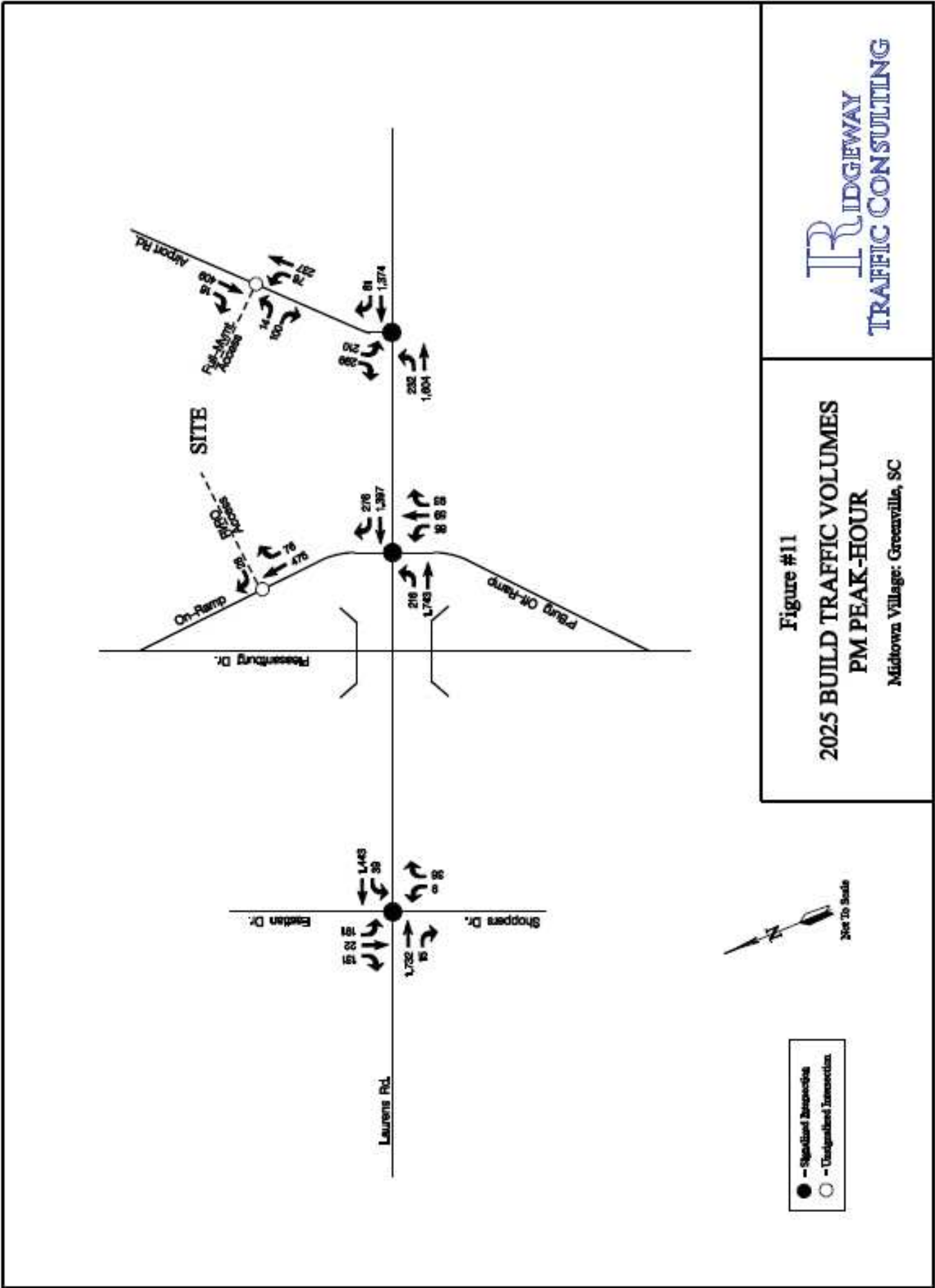
BUILD TRAFFIC VOLUMES

The site-generated traffic volumes shown in Figure 8 & 9 have been added to the 2025 No-Build traffic volumes (Figure 6 & 7) to represent 2025 Build traffic volume conditions which are depicted graphically in Figures 10 & 11. These volumes were used as the basis for analysis to determine potential improvement measures necessary to mitigate traffic impacts caused by the project.









TRAFFIC OPERATIONS ANALYSIS

Measuring existing and future traffic volumes quantifies traffic flow within the study area. To assess quality of flow, capacity analyses were conducted under Existing, No-Build, and Build traffic volume conditions. Capacity analyses provide an indication of how well the study area intersections serve existing and future traffic demands.

METHODOLOGY

Level-of-Service

A primary result of capacity analyses is the assignment of level-of-service (LOS) to traffic facilities under various traffic flow conditions. The concept of level-of-service is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels-of-service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst.

Since the level-of-service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels-of-service, depending on the time of day, day of week, or period of a year.

ANALYSIS RESULTS

Intersection analyses have been conducted for the study area intersections under Existing, and Future 2025 (No-Build & Build) conditions. The results of these analyses are shown in Table 3. The intersection analysis worksheets are contained in the Appendix at the end of this report. It should be noted that existing signal timings were obtained from the City of Greenville and utilized in all analysis scenarios. The Laurens Road at Northbound Pleasantburg Ramp intersection and the Airport Road intersection operate with a common controller due to the close spacing of these intersections. These intersections have been reported with Synchro Methodology with regards to delay and service levels as HCS Methodology does not allow for "clustered" intersections.

Table 3
LEVEL-OF-SERVICE SUMMARY
Midtown Village – Greenville, SC

	Time	BASELINE 2021 CONDITIONS		2025 NO-BUILD CONDITIONS WITHOUT PROJECT		2025 BUILD CONDITIONS WITH PROJECT	
	Period	Delay ^a	LOS ^b	Delay	LOS	Delay	LOS
<u>Signalized Study Area Intersections</u>							
Laurens Road at Eastlan Drive/Shoppers Drive	AM	19.3	B	21.2	C	22.4	C
	PM	9.5	A	10.5	B	11.8	B
Laurens Road at Pleasantburg Ramps Northbound	AM	5.4	A	6.1	A	7.6	A
	PM	11.3	B	11.8	B	13.7	B
Laurens Road at Airport Road	AM	7.8	A	10.1	B	14.0	B
	PM	12.3	B	15.3	B	21.1	C
<u>Unsignalized Study Area Intersections</u>							
Airport Road at Site Access	AM					10.4	B
	PM					12.6	B
Pleasantburg NB On-Ramp at Site Access	AM					10.1	B
	PM					11.9	B

^aDelay in seconds-per-vehicle.

^bLOS = Level-of-Service.

GENERAL NOTES:

1. For signalized intersections, Delay is representative of overall intersection.
2. For unsignalized intersections, Delay is representative of critical movement/approach.

As shown, under Existing conditions, operations depict favorable individual intersection operations (LOS A or B) during both peak hours at each intersection. While no significant capacity issues show up in the individual intersection analyses, the very short spacing between intersections, specifically the Pleasantburg Ramp and Airport Road intersections does result in queuing between these intersections during peak periods. These intersections are only separated by approximately 150-feet, which inevitably causes queuing between intersections during times of peak flow. These two intersections operate with one controller and these intersections operate as efficiently as possible given the short separation distance.

Under 2025 No-Build conditions, which account for 3-percent annual background growth in traffic, operations are expected to degrade one service level during each peak hour for the intersection of Laurens Road at Eastlan Drive/Shoppers Drive; LOS B to LOS C during the AM peak hour, and LOS A to B during the PM peak hour. The other individual intersections have sufficient capacity, yet insufficient spacing of the Pleasantburg ramp and Airport Road intersections will continue to be an issue during peak periods.

Future 2025 Build conditions, which include project-specific traffic related to Midtown Village project, indicate that overall service levels are expected to remain acceptable. The only projected change in service level is for the Laurens Road at Airport Road intersection during the PM peak hour which is expected to degrade one service level from LOS B to C.

Both direct access points to Airport Road (full movement) and to the Pleasantburg On-Ramp (right-in/right-out) are expected to operate acceptably with the incorporation of recommended geometry and traffic control as provided in the next section of this report.

MITIGATION

The final phase of the analysis process is to identify mitigating measures which may either minimize the impact of the project on the transportation system or tend to alleviate poor service levels not caused by the project. Measures considered necessary to mitigate roadway system deficiencies are discussed below as they relate to the impacts of the proposed project.

PROPOSED SITE ACCESS

Access to/from the proposed development will be provided two direct connections to the public roadway system; one full movement connection to Airport Road, and one limited right-in/right-out access to the northbound Pleasantburg Drive On-Ramp. Recommendations for each of the site access intersections are provided as follows:

Airport Road at Site Access (Full-Movement)

This access will occur along Airport Road approximately 425-feet east of Laurens Road, slightly east of the location of the existing access that serviced the former SCDOT facility. It should be noted that this access will replace three existing full-movement access drives along this section of Airport Road. The new access will be a divided "boulevard" style with a landscaped median separating entering and exiting movements. The exit approach generally aligns with a low-volume entry-only driveway on the opposite side of Airport Road. The separation for this driveway with Laurens Road is in compliance with the SCDOT ARMS Manual for a 35 MPH roadway. The boulevard entrance is proposed approximately 50-ft. to the east and will be offset from an existing gated access for postal employees only. The approximate 25-ft. offset is in the left-hand direction and conflicts with left turns are not anticipated however the final design will need to be coordinated with SCDOT. The following geometry is recommended for this access:

- *Eastbound (Airport Road) Approach:* The eastbound approach of Airport Road at the site access should be modified/restriped as a two-way left-turn lane for approximately 100-feet across the site access intersection and then taper back to a two lane section to the east of the access drive. This will allow for storage for approximately four to five vehicles for the entering left-turn movement, which will reduce the impact on through movements for Airport Road. The final design for this frontage should be coordinated with SCDOT. This will still allow for approximately 300-feet of storage for the inside shared left/right lane for westbound Airport Road at Laurens Road which has been confirmed to be sufficient via SimTraffic simulations (provided in Appendix);
- *Westbound (Airport Road) Approach:* Maintain one through lane that will also service right-turns into the project. A dedicated right-turn lane is not warranted based on projected volumes based on Figure 9.5A from the SCDOT Highway Design Manual;
- *Southbound (Site Access) Approach:* Provide two lanes entering and two lanes exiting the site designated as separate left and right turn lanes. A minimum clear throat between Airport Road and the first drive aisle of 50-feet will be required; and
- *Traffic Control:* Place new access intersection under STOP sign control for movements exiting the site.

Pleasantburg Drive Northbound On-Ramp at Site Access (Right-In/Right-Out)

This access will occur along the northbound on-ramp for Pleasantburg Drive, approximately 500-feet north of Laurens Road. This separation is in compliance with the SCDOT ARMS Manual for a 35 MPH roadway. The following geometry is recommended for this access:

- *Northbound (On-Ramp) Approach:* Maintain one through lane for the on-ramp and construct a standard 100-ft. right-turn deceleration lane with 150-ft. of taper. This will minimize the impacts of right-turn entering movements on through traffic for the on-ramp destined to Pleasantburg Drive;
- *Westbound (Site Access) Approach:* Provide one lane entering and one lane exiting the site designated for right-turns only. A one-way sign along the on-ramp should be placed aligning directly opposite the exiting lane for the project to delineate the one-way flow of the on-ramp. A “no left turn” sign should also be provided for the westbound site access approach; and
- *Traffic Control:* Place new access intersection under STOP sign control for right-turn movements exiting the site.

OFF-SITE INTERSECTIONS

As documented in Table 3, the project is expected to have relatively minor impacts on the three off-site intersections studied for this report along Laurens Road. As mentioned previously, queuing along Laurens Road can be expected to continue with or without the project. This is not a function of individual intersection capacity, but the close spacing of intersections.

Pedestrian Accommodations

Based on previous discussions with SCDOT and the City, the need for pedestrian accommodations has been reviewed, specifically as it pertains to facilitating pedestrian movements along and across Laurens Road. Based on a field review, the following two crosswalks are recommended to be incorporated as part of the project:

- **Laurens Road Crossing:** A crosswalk crossing Laurens Road is recommended at the Pleasantburg Drive Ramps intersection on the east side. The project corner in the northeast quadrant of this intersection will attract pedestrians from the site from the ramp frontage and Airport Road frontage. This crosswalk will facilitate pedestrian movements across Laurens Road, and it appears that it can be implemented without modifying STOP bars on Laurens Road, which is critical due to the tight spacing between the ramp intersection and Airport Road. The crosswalk should be supplemented with pedestrian heads, push buttons and standard signage.
- **Airport Road Crossing:** A crosswalk for Airport Road should be striped on the north side of Laurens Road. This will facilitate pedestrian movements along Laurens Road. The crosswalk should be supplemented with pedestrian heads, push buttons and standard signage.

Laurens Road Left-Turns onto Pleasantburg Ramp and Airport Road

During past coordination meetings with the SCDOT and the City of Greenville, there were discussions regarding the existing issue of left-turns for eastbound Laurens Road onto the Pleasantburg Ramp and Airport Road. Due to the close spacing of the two signalized intersections, left-turns onto Airport Road typically get in the left-turn lane prior to the Pleasantburg ramp and can be held up by a queued left-turner waiting to turn onto the ramp. Sometimes traffic will re-enter the inside through lane to maneuver around a queued left-turner trying to access the ramp and then turn left onto Airport Road during the permissive phase for Laurens

Road. One measure that could help alleviate this issue is installing solid white striping for the left-turn lane approaching the ramp, which is currently a standard broken lane line. This would help indicate to motorists that they should stay in the left-turn lane once they have entered it, even if they are held up temporarily by a left-turn onto the ramp.

CONCLUSIONS

This report has been prepared to analyze the traffic impacts and access requirements for a new mixed-use project to be known as Midtown Village within the City limits of Greenville, South Carolina. The project is expected to be constructed and operational by 2024, and therefore a 2025 future horizon year (Build PLUS 1 Year) has been reviewed within this report. The project site, which is approximately 12.6-acres in size, is currently unoccupied, but previously was occupied by SCDOT District 3 offices.

Individual intersection capacity is not an issue within the study area, however the close spacing (approximately 150-feet) of the Pleasantburg Ramps and Airport Road does inevitably cause queuing between these intersections during times of peak traffic flow. These intersections operate with one controller, which services the intersections as efficiently as possible given the close spacing.

Access is proposed via two driveways; a full-movement access to Airport Road (boulevard with median) that will replace three existing full movement access drives along this frontage, and a restricted right-in/right-out access to the northbound Pleasantburg Drive ramp. A short section (100-feet) of two-way left-turn lane is recommended for Airport Road at the full-movement boulevard access. This will allow for left-turn storage for approximately four to five vehicles entering the project, while maintaining sufficient storage for Airport Road movements queuing at Laurens Road. The final design for this frontage should be coordinated with SCDOT. A standard right-turn lane is recommended for the northbound Pleasantburg Drive ramp for movements entering the project along with appropriate signage to enforce the one-way (right-out only) operations of this intersection.

The impact of the project on off-site intersections is expected to be relatively minor based on capacity analyses, however queuing along Laurens Road between the Pleasantburg ramp signal and Airport Road signal can be expected to continue during peak periods due to the short spacing between these intersections. This queuing occurs under existing conditions and can be expected to continue in the future with or without the Midtown Village project. These intersections are operated by one traffic signal controller, which provides as efficient operations as possible given the short spacing between these intersections. Recommendations have been made regarding crosswalks for movements along and crossing Laurens Road to facilitate pedestrian movements that may increase with the project.

APPENDIX

- Count Data
- Internal Capture Spreadsheets
- Capacity Analyses
- Queuing Data Airport Road
- Turn Lane Nomographs

COUNT DATA

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses																		
	Airport Rd Southbound				Laurens Rd Westbound				Northbound				Laurens Rd Eastbound					
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total	
07:00	7	0	8	0	0	141	5	0	0	0	0	0	41	164	0	0	366	
07:15	4	0	19	1	0	186	13	0	0	0	0	0	40	228	0	0	49	
07:30	11	0	18	1	0	239	5	0	0	0	0	0	48	257	0	0	579	
07:45	9	0	26	0	0	273	8	0	0	0	0	0	40	305	0	0	681	
Total	31	0	71	2	0	839	31	0	0	0	0	0	169	954	0	0	2097	
08:00	9	0	32	0	0	271	11	0	0	0	0	0	45	258	0	0	626	
08:15	10	0	37	0	0	320	8	0	0	0	0	0	35	235	0	0	643	
08:30	9	0	48	0	0	296	8	0	0	0	0	0	35	226	0	0	622	
08:45	13	0	33	0	0	271	7	0	0	0	0	0	30	243	0	0	597	
Total	41	0	150	0	0	1158	32	0	0	0	0	0	145	962	0	0	2488	
16:00	21	0	56	0	0	274	16	0	0	0	0	0	41	256	0	0	664	
16:15	24	0	50	0	0	278	11	0	0	0	0	0	41	272	0	0	678	
16:30	34	0	56	0	0	253	13	0	0	0	0	0	54	292	0	0	702	
16:45	35	0	50	0	0	285	10	0	0	0	0	0	37	303	0	0	720	
Total	114	0	212	0	0	1090	50	0	0	0	0	0	173	1123	0	0	2762	
17:00	37	0	67	0	0	264	13	0	0	0	0	0	52	309	0	0	742	
17:15	29	0	39	0	0	299	10	0	0	0	0	0	35	353	0	0	765	
17:30	28	0	60	0	0	295	7	0	0	0	0	0	36	330	0	0	756	
17:45	15	0	50	0	0	286	7	0	0	0	0	0	43	277	0	0	678	
Total	109	0	216	0	0	1144	37	0	0	0	0	0	166	1269	0	0	2941	
Grand Total	295	0	649	2	0	4231	150	0	0	0	0	0	653	4308	0	0	10288	
Approach %	31.2	0	88.6	0.2	0	96.6	3.4	0	0	0	0	0	13.2	86.6	0	0		
Total %	2.9	0	6.3	0	0	41.1	1.5	0	0	0	0	0	6.3	41.9	0	0		
Passenger Vehicles	295	0	642	2	0	4155	145	0	0	0	0	0	648	4240	0	0	10127	
% Passenger Vehicles	100	0	98.9	100	0	98.2	96.7	0	0	0	0	0	99.2	98.4	0	0	98.4	
Heavy Vehicles	0	0	7	0	0	58	4	0	0	0	0	0	5	57	0	0	131	
% Heavy Vehicles	0	0	1.1	0	0	1.4	2.7	0	0	0	0	0	0.8	1.3	0	0	1.3	
Buses	0	0	0	0	0	18	1	0	0	0	0	0	0	11	0	0	30	
% Buses	0	0	0	0	0	0.4	0.7	0	0	0	0	0	0	0.3	0	0	0.3	

S H O R T C O U N T S , L L C735 Maryland St
Columbia, SC 29201*We can't say we're the Best, but you Can!*

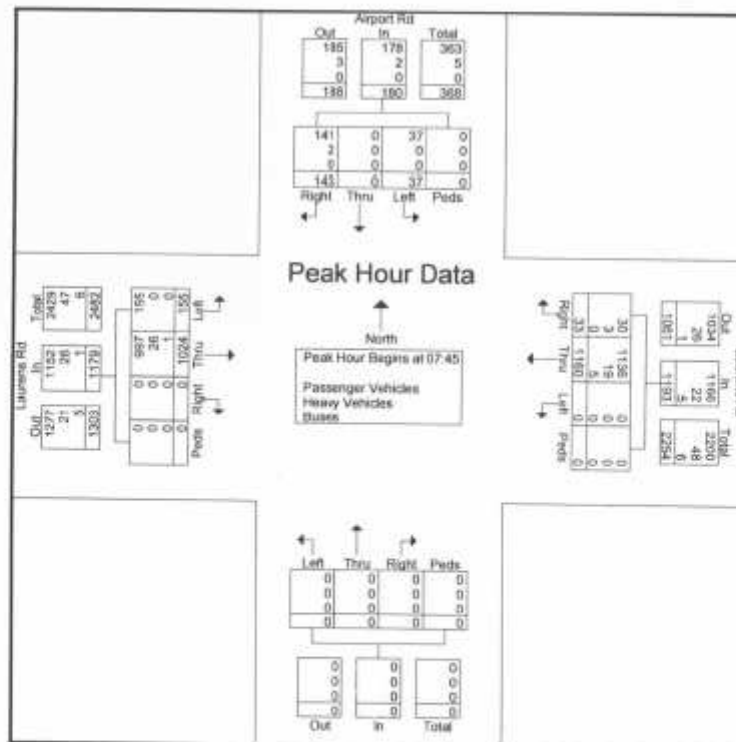
File Name : Laurens Rd @ Airport Rd

Site Code :

Start Date : 09/03/2019

Page No : 3

	Airport Rd Southbound					Laurens Rd Westbound					Northbound					Laurens Rd Eastbound				
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 07:45																				
07:45	9	0	26	0	35	0	273	8	0	281	0	0	0	0	0	40	305	0	0	345
08:00	9	0	32	0	41	0	271	11	0	282	0	0	0	0	0	45	258	0	0	303
08:15	10	0	37	0	47	0	328	6	0	326	0	0	0	0	0	35	235	0	0	270
08:30	9	0	48	0	57	0	296	8	0	304	0	0	0	0	0	35	226	0	0	261
Total Volume	37	0	143	0	180	0	1168	33	0	1193	0	0	0	0	0	155	1024	0	0	1179
% App. Total	20.6	0	79.4	0		0	97.2	2.8	0		0	0	0	0	0	13.1	86.9	0	0	
PHV	929	000	745	000	789	000	906	750	000	915	000	000	300	000	000	861	839	000	000	854
Passenger Vehicles	37	0	141	0	178	0	1136				0	0	0	0	0	100	97.4	0	0	97.8
% Passenger Vehicles	100	0	98.6	0	98.9	0	97.9	90.9	0	97.7	0	0	0	0	0	100	97.4	0	0	97.8
Heavy Vehicles	0	0	2	0	2	0	19	3	0	22	0	0	0	0	0	0	26	0	0	26
% Heavy Vehicles	0	0	1.4	0	1.1	0	1.6	9.1	0	1.8	0	0	0	0	0	0	2.5	0	0	2.2
Buses	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1
% Buses	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0	0.1	0	0	0.1



SHOW COUNTS, LLC735 Maryland St
Columbia, SC 29201*We can't say we're the Best, but you Can!*

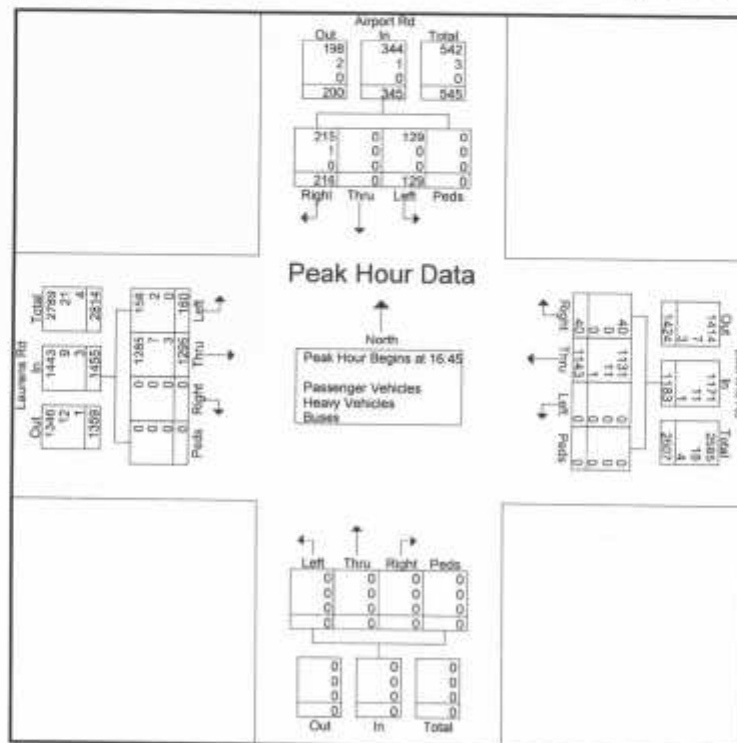
File Name : Laurens Rd @ Airport Rd

Site Code :

Start Date : 09/03/2019

Page No : 4

Start Time	Airport Rd Southbound					Laurens Rd Westbound					Northbound					Laurens Rd Eastbound				
	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total	Left	Thru	Right	Peds	App Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																				
Peak Hour for Entire Intersection Begins at 16:45																				
16:45	35	0	50	0	85	0	285	10	0	295	0	0	0	0	0	37	303	0	0	340
17:00	37	0	67	0	104	0	264	13	0	277	0	0	0	0	0	52	309	0	0	361
17:15	29	0	39	0	68	0	299	10	0	309	0	0	0	0	0	35	353	0	0	388
17:30	28	0	60	0	88	0	295	7	0	302	0	0	0	0	0	36	330	0	0	366
Total Volume	129	0	216	0	345	0	1143	40	0	1183	0	0	0	0	0	160	1295	0	0	1455
% App. Total	37.4	0	62.6	0		0	96.6	3.4	0		0	0	0	0		11	89	0	0	
PHF	.072	.000	.000	.000	.029	.000	.956	.769	.000	.957	.000	.000	.000	.000	.000	.769	.917	.000	.000	.938
Passenger Vehicles	129	0	216	0	345	0	1131				0	0	0	0	0	1285				
% Passenger Vehicles	100	0	99.5	0	99.7	0	99.0	100	0	99.0	0	0	0	0	0	98.8	99.2	0	0	99.2
Heavy Vehicles	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	2	7	0	0	9
% Heavy Vehicles	0	0	0.5	0	0.3	0	1.0	0	0	0.9	0	0	0	0	0	1.3	0.5	0	0	0.6
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3
% Buses	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.2



S H O R T C O U N T S , L L C735 Maryland St
Columbia, SC 29201*We can't say we're the Best, but you Can!*File Name : Laurens Rd @ Eastlan-Shoppers Dr
Site Code :
Start Date : 09/03/2019
Page No : 1

Groups Printed - Passenger Vehicles - Heavy Vehicles - Buses																	
Start Time	Eastlan Dr Southbound				Laurens Rd Westbound				Shoppers Dr Northbound				Laurens Rd Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	18	1	11	0	1	135	0	0	0	0	1	0	0	196	0	0	363
07:15	25	8	17	0	5	166	0	0	0	0	0	0	0	259	1	0	481
07:30	20	8	13	1	2	243	0	0	0	0	0	0	0	297	0	0	584
07:45	52	3	25	0	2	292	0	0	0	0	3	1	0	300	1	0	679
Total	115	20	66	1	10	636	0	0	0	0	4	1	0	1052	2	0	2107
08:00	38	1	27	0	2	281	0	0	0	0	2	0	0	262	1	0	614
08:15	37	4	30	0	10	302	0	0	0	0	0	1	0	246	0	0	630
08:30	28	3	28	0	7	310	0	0	0	0	0	1	0	246	0	0	623
08:45	28	1	24	0	8	271	0	0	0	0	4	1	0	247	0	0	582
Total	129	9	109	0	27	1164	0	0	0	0	6	3	0	1001	1	0	2449
16:00	43	1	32	0	7	287	0	0	2	0	6	0	0	255	0	0	633
16:15	34	6	33	0	7	297	0	0	2	0	10	2	0	279	2	0	672
16:30	32	1	32	0	5	293	2	0	1	0	6	0	0	304	3	0	679
16:45	29	5	24	0	9	298	0	0	1	0	7	0	0	330	2	0	705
Total	138	13	121	0	28	1175	2	0	6	0	29	2	0	1168	7	0	2689
17:00	35	3	25	0	8	271	0	0	3	0	12	0	0	347	4	0	708
17:15	31	6	28	0	6	288	0	0	0	0	7	1	0	369	4	0	750
17:30	37	5	33	0	10	312	0	0	4	0	4	1	0	349	2	0	757
17:45	37	2	29	0	10	295	0	0	1	0	6	1	0	295	2	0	678
Total	140	16	115	0	34	1176	0	0	8	0	29	3	0	1360	12	0	2893
Grand Total	522	58	411	1	99	4351	2	0	14	0	68	9	0	4581	22	0	10138
Approach %	52.6	5.8	41.4	0.1	2.2	97.7	0	0	15.4	0	74.7	9.9	0	99.5	0.5	0	
Total %	5.1	0.6	4.1	0	1	42.9	0	0	0.1	0	0.7	0.1	0	45.2	0.2	0	
Passenger Vehicles	511	57	401	1	98	4273	0	0	14	0	68	9	0	4509	22	0	9963
% Passenger Vehicles	97.9	98.3	97.6	100	99	98.2	0	0	100	0	100	100	0	98.4	100	0	98.3
Heavy Vehicles	7	0	7	0	1	63	2	0	0	0	0	0	0	63	0	0	143
% Heavy Vehicles	1.3	0	1.7	0	1	1.4	100	0	0	0	0	0	0	1.4	0	0	1.4
Buses	4	1	3	0	0	15	0	0	0	0	0	0	0	9	0	0	32
% Buses	0.8	1.7	0.7	0	0	0.3	0	0	0	0	0	0	0	0.2	0	0	0.3

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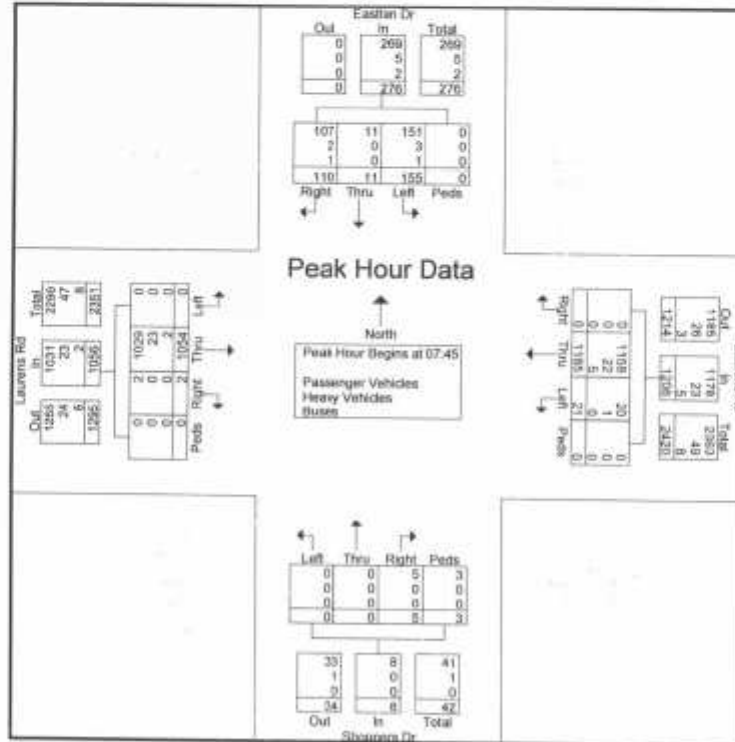
File Name : Laurens Rd @ Eastlan-Shoppers Dr

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	Eastlan Dr Southbound					Laurens Rd Westbound					Shoppers Dr Northbound					Laurens Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	62	3	25	0	90	2	292	0	0	294	0	0	3	1	4	0	300	1	0	301	679
08:00	38	1	27	0	66	2	261	0	0	263	0	0	2	0	2	0	262	1	0	263	614
08:15	37	4	30	0	71	10	302	0	0	312	0	0	0	1	1	0	246	0	0	246	630
08:30	28	3	28	0	59	7	310	0	0	317	0	0	0	1	1	0	246	0	0	246	623
Total Volume	155	11	110	0	276	21	1185	0	0	1206	0	0	5	3	8	0	1054	2	0	1056	2546
% App. Total	55.2	4	39.9	0		1.7	98.3	0	0		0	0	62.5	37.5		0	99.8	0.2	0		
PHF	745	688	917	000	853	525	956	000	000	951	000	000	417	750	500	000	878	500	000	877	937
Passenger Vehicles	131	11	107	0	249	20	1158	0	0	1178	0	0	100	100	100	0	1029	100	0	1029	2387
% Passenger Vehicles	97.4	100	97.3	0	97.5	95.2	97.7	0	0	97.7	0	0	100	100	100	0	97.6	100	0	97.6	97.6
Heavy Vehicles	3	0	2	0	5	1	22	0	0	23	0	0	0	0	0	0	23	0	0	23	51
% Heavy Vehicles	1.9	0	1.8	0	1.8	4.8	1.9	0	0	1.9	0	0	0	0	0	0	2.2	0	0	2.2	2.0
Buses	1	0	1	0	2	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	9
% Buses	0.6	0	0.9	0	0.7	0	0.4	0	0	0.4	0	0	0	0	0	0	0.2	0	0	0.2	0.4



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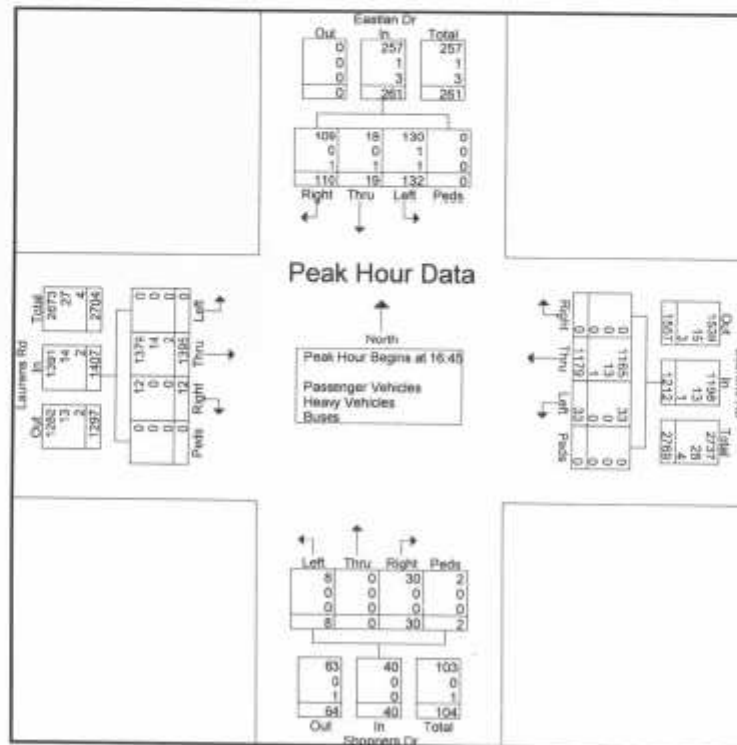
File Name : Laurens Rd @ Eastlan-Shoppers Dr

Site Code :

Start Date : 09/03/2019

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	Eastlan Dr Southbound					Laurens Rd Westbound					Shoppers Dr Northbound					Laurens Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	29	5	24	0	58	9	298	0	0	307	1	0	7	0	8	0	330	2	0	332	705
17:00	35	3	25	0	63	8	271	0	0	279	3	0	12	0	15	0	347	4	0	351	708
17:15	31	6	28	0	65	6	298	0	0	304	0	0	7	1	8	0	369	4	0	373	750
17:30	37	5	33	0	75	10	312	0	0	322	4	0	4	1	9	0	349	2	0	351	757
Total Volume	132	19	110	0	261	33	1179	0	0	1212	8	0	30	2	40	0	1395	12	0	1407	2920
% App. Total	50.6	7.3	42.1	0		2.7	97.3	0	0		30	0	75	5		0	95.1	0.9	0		
PHF	.892	.792	.833	.000	.870	.825	.945	.000	.000	.941	.560	.000	.625	.500	.667	.000	.945	.750	.000	.943	.984
Passenger Vehicles	132	19	109	0	261	33	1165				8	0	29	2	39		1379				
% Passenger Vehicles	98.5	94.7	99.1	0	98.5	100	98.6			98.8	100	0	100	100	100		98.9	100	0	98.9	98.8
Heavy Vehicles	1	0	0	0	1	0	13			13	0	0	0	0	0		14	0	0	14	28
% Heavy Vehicles	0.8	0	0	0	0.4	0	1.1			1.1	0	0	0	0	0		1.0	0	0	1.0	1.0
Buses	1	1	1	0	3	0	1			1	0	0	0	0	0		2	0	0	2	6
% Buses	0.8	5.3	0.9	0	1.1	0	0.1			0.1	0	0	0	0	0		0.1	0	0	0.1	0.2



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Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses																	
Start Time	Pleasantburg Dr Southbound				Laurens Rd Westbound				Pleasantburg Dr Northbound				Laurens Rd Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	0	0	0	0	105	15	0	5	2	5	0	15	175	0	0	323
07:15	0	0	0	0	0	163	25	0	2	1	9	0	25	245	0	0	470
07:30	0	0	0	0	0	206	27	0	21	2	17	0	25	295	0	0	563
07:45	0	0	0	0	0	258	37	0	21	1	15	0	24	334	0	0	690
Total	0	0	0	0	0	732	105	0	49	6	46	0	89	1049	0	0	2076
08:00	0	0	0	0	0	253	39	0	21	3	19	0	14	306	0	0	657
08:15	0	0	0	0	0	309	29	0	10	2	12	1	19	274	0	0	656
08:30	0	0	0	0	0	295	47	1	10	1	16	0	17	242	0	0	629
08:45	0	0	0	0	0	273	34	0	18	2	13	0	22	298	0	0	630
Total	0	0	0	0	0	1130	149	1	59	8	60	1	72	1092	0	0	2572
16:00	0	0	0	0	0	292	62	0	26	12	15	0	34	267	0	0	708
16:15	0	0	0	0	0	260	49	0	19	6	21	0	21	303	0	0	679
16:30	0	0	0	0	0	278	52	0	27	2	17	0	18	315	0	0	709
16:45	0	0	0	0	0	274	56	0	26	6	22	0	34	351	0	0	771
Total	0	0	0	0	0	1104	219	0	100	26	75	0	107	1236	0	0	2867
17:00	0	0	0	0	0	262	68	0	11	4	21	0	44	341	0	0	751
17:15	0	0	0	0	0	288	53	0	17	3	16	0	28	402	0	0	807
17:30	0	0	0	0	0	278	55	0	16	8	19	0	40	339	0	0	755
17:45	0	0	0	0	0	286	63	0	24	4	20	0	29	326	0	0	752
Total	0	0	0	0	0	1114	239	0	68	19	76	0	141	1408	0	0	3065
Grand Total	0	0	0	0	0	4080	712	1	276	59	257	1	409	4785	0	0	10580
Approch %	0	0	0	0	0	85.1	14.9	0	46.5	9.9	43.3	0.2	7.9	92.1	0	0	
Total %	0	0	0	0	0	38.6	6.7	0	2.6	0.6	2.4	0	3.9	45.2	0	0	
Passenger Vehicles	0	0	0	0	0	4006	701	1	272	59	255	1	401	4704	0	0	10400
% Passenger Vehicles	0	0	0	0	0	98.2	98.5	100	98.6	100	99.2	100	98	98.3	0	0	98.3
Heavy Vehicles	0	0	0	0	0	56	8	0	4	0	2	0	6	71	0	0	147
% Heavy Vehicles	0	0	0	0	0	1.4	1.1	0	1.4	0	0.8	0	1.5	1.5	0	0	1.4
Buses	0	0	0	0	0	18	3	0	0	0	0	0	2	10	0	0	33
% Buses	0	0	0	0	0	0.4	0.4	0	0	0	0	0	0.5	0.2	0	0	0.3

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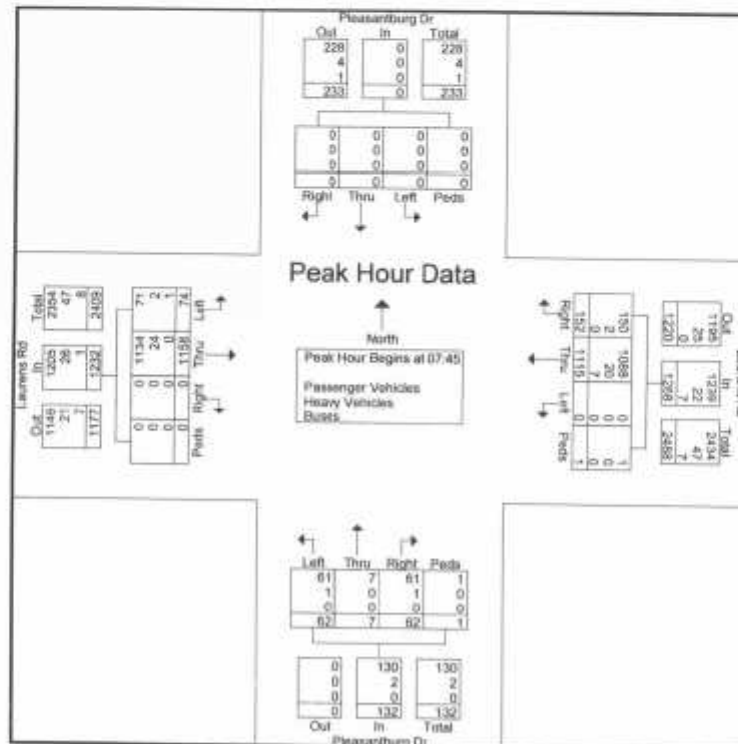
File Name : Laurens Rd @ Pleasantburg Dr

Site Code :

Start Date : 09/03/2019

Page No : 3

	Pleasantburg Dr Southbound					Laurens Rd Westbound					Pleasantburg Dr Northbound					Laurens Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Vol. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45																					
07:45	0	0	0	0	0	0	258	37	0	295	21	1	15	0	37	24	334	0	0	358	690
08:00	0	0	0	0	0	0	253	39	0	292	21	3	19	0	43	14	308	0	0	322	657
08:15	0	0	0	0	0	0	309	29	0	338	10	2	12	1	25	19	274	0	0	293	656
08:30	0	0	0	0	0	0	295	47	1	343	10	1	16	0	27	17	242	0	0	259	629
Total Volume	0	0	0	0	0	0	1115	152	1	1268	62	7	62	1	132	74	1158	0	0	1232	2632
% App. Total	0	0	0	0	0	0	87.9	12	0.1	100	47	5.3	47	0.8	100	6	94	0	0	100	100
PHF	.000	.000	.000	.000	.000	.000	.002	.009	.001	.002	.038	.053	.016	.001	.007	.071	.067	.000	.000	.060	.054
Passenger Vehicles	0	0	0	0	0	0	1088	148	0	1236	59	6	59	1	115	70	1134	0	0	1134	2370
% Passenger Vehicles	0	0	0	0	0	0	97.6	98.7	100	97.7	98.4	100	98.4	100	98.5	95.9	97.0	0	0	97.8	97.6
Heavy Vehicles	0	0	0	0	0	0	20	2	0	22	1	0	1	0	2	2	24	0	0	26	50
% Heavy Vehicles	0	0	0	0	0	0	1.8	1.3	0	1.7	1.6	0	1.6	0	1.5	2.7	2.1	0	0	2.2	1.9
Buses	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	1	0	0	0	1	8
% Buses	0	0	0	0	0	0	0.6	0	0	0.6	0	0	0	0	0	1.4	0	0	0	0.1	0.3



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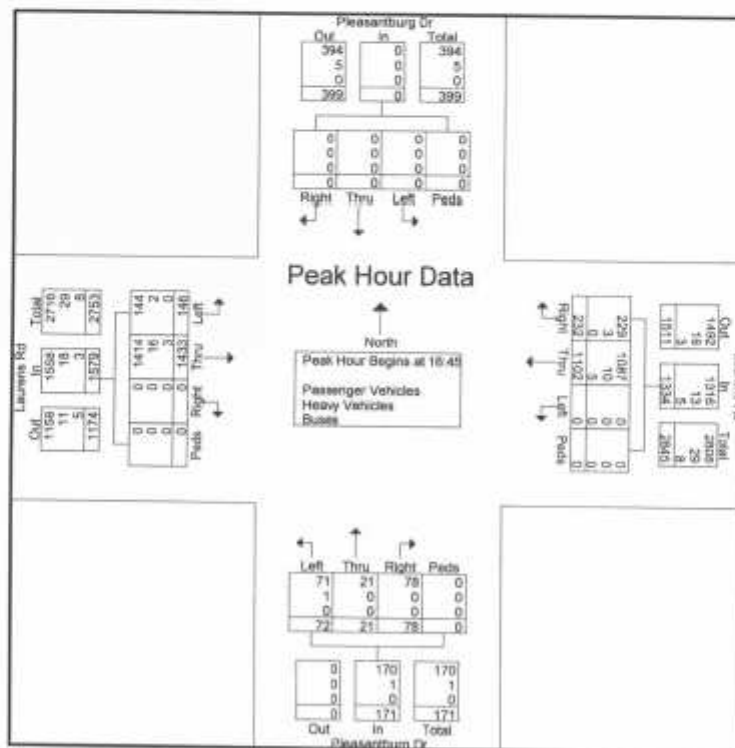
File Name : Laurens Rd @ Pleasantburg Dr

Site Code :

Start Date : 09/03/2019

Page No : 4

	Pleasantburg Dr Southbound					Laurens Rd Westbound					Pleasantburg Dr Northbound					Laurens Rd Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Net Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	274	56	0	330	28	6	22	0	56	34	351	0	0	385	771
17:00	0	0	0	0	0	0	262	58	0	320	11	4	21	0	36	44	341	0	0	385	751
17:15	0	0	0	0	0	0	288	53	0	341	17	3	16	0	36	28	402	0	0	430	807
17:30	0	0	0	0	0	0	278	55	0	333	16	8	19	0	43	40	339	0	0	379	755
Total Volume	0	0	0	0	0	0	1102	232	0	1334	72	21	78	0	171	146	1433	0	0	1579	3084
% App. Total	0	0	0	0	0	0	82.6	17.4	0	100	42.1	12.3	45.6	0	100	9.2	90.8	0	0	100	
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.957	0.953	0.000	0.976	0.643	0.656	0.695	0.000	0.783	0.830	0.891	0.000	0.000	0.918	0.956
Passenger Vehicles	0	0	0	0	0	0	1087	98.6	0	98.7	98.6	100	100	0	99.4	98.6	98.7	0	0	98.7	98.7
% Passenger Vehicles	0	0	0	0	0	0	98.6	98.7	0	98.7	98.6	100	100	0	99.4	98.6	98.7	0	0	98.7	98.7
Heavy Vehicles	0	0	0	0	0	0	10	3	0	13	1	0	0	0	1	2	16	0	0	18	32
% Heavy Vehicles	0	0	0	0	0	0	0.9	1.3	0	1.0	1.4	0	0	0	0.6	1.4	1.1	0	0	1.1	1.0
Buses	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	3	0	0	3	8
% Buses	0	0	0	0	0	0	0.5	0	0	0.4	0	0	0	0	0	0	0.2	0	0	0.2	0.3



INTERNAL CAPTURE SPREADSHEETS

NCHRP 654 Internal Trip Capture Estimation Tool			
Project Name:	Midtown Village	Organization:	Ridgeway Traffic
Project Location:	Greenville SC	Performed By:	MRR
Scenario Description:		Date:	6/7/2021
Analysis Year:	2025	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ²		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				46	40	6
Retail				28	17	11
Restaurant				0	0	0
Cinema/Entertainment				0		
Residential				133	34	99
Hotel				57	34	23
All Other Land Uses ²				0		
				264	125	139

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ³	% Transit	% Non-Motorized	Veh. Occ. ³	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ³						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix ⁴						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	2		0	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	0	0		0
Hotel	1	1	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	264	125	139
Internal Capture Percentage	7%	7%	8%
External Vehicle-Trips ⁵	246	115	130
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	10%	31%
Retail	24%	27%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	3%	2%
Hotel	0%	5%

¹Land Use Codes (LUCs) from Trip Generation Manual, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 654 Internal Trip Capture Estimation Tool			
Project Name:	Midtown Village	Organization:	Ridgeway Traffic
Project Location:	Greenville SC	Performed By:	MRR
Scenario Description:		Date:	5/7/2021
Analysis Year:	2025	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ¹		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				46	7	39
Retail				114	55	59
Restaurant				98	61	37
Cinema/Entertainment				0		
Residential				168	102	66
Hotel				66	35	33
All Other Land Uses ²				0		
				494	260	234

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	1	0	1	0
Retail	1		17	0	15	3
Restaurant	1	15		0	7	3
Cinema/Entertainment	0	0	0		0	0
Residential	3	6	8	0		2
Hotel	0	1	3	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	494	260	234
Internal Capture Percentage	37%	35%	36%
External Vehicle-Trips ³	310	168	142
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁵	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	71%	15%
Retail	47%	61%
Restaurant	49%	70%
Cinema/Entertainment	N/A	N/A
Residential	23%	30%
Hotel	23%	12%




















¹ Land Use Codes (LUCs) from Trip Generation Manual, published by the Institute of Transportation Engineers.
² Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
³ Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual).
⁴ Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.
⁵ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.
*Person-Trips
*Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

CAPACITY ANALYSES

EXISTING AM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.













06/08/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1136	2	22	1265	0	0	0	5	164	12	117
Future Volume (veh/h)	0	1136	2	22	1265	0	0	0	5	164	12	117
Initial Q (Q ₀), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbT})	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1209	2	23	1346	0	0	0	5	174	13	124
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	64	2739	5	355	2674	0	64	0	251	284	24	230
Arrive On Green	0.00	0.75	0.75	0.25	0.25	0.00	0.00	0.00	0.16	0.16	0.16	0.16
Sat Flow, veh/h	406	3640	6	461	3647	0	1252	0	1585	1411	153	1456
Grp Volume(v), veh/h	0	590	621	23	1346	0	0	0	5	174	0	137
Grp Sat Flow(s),veh/h/ln	406	1777	1869	461	1777	0	1252	0	1585	1411	0	1608
Q Serve(g _s), s	0.0	13.8	13.8	4.5	36.4	0.0	0.0	0.0	0.3	13.3	0.0	8.8
Cycle Q Clear(g _c), s	0.0	13.8	13.8	18.3	36.4	0.0	0.0	0.0	0.3	13.6	0.0	8.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	64	1337	1407	355	2674	0	64	0	251	284	0	254
V/C Ratio(X)	0.00	0.44	0.44	0.06	0.50	0.00	0.00	0.00	0.02	0.61	0.00	0.54
Avail Cap(c _a), veh/h	64	1337	1407	355	2674	0	235	0	467	476	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.83	0.83	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.1	5.1	22.8	24.1	0.0	0.0	0.0	39.8	45.6	0.0	43.4
Incr Delay (d ₂), s/veh	0.0	1.1	1.0	0.3	0.6	0.0	0.0	0.0	0.0	2.1	0.0	1.8
Initial Q Delay(d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	4.5	0.6	17.4	0.0	0.0	0.0	0.1	4.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	6.1	23.1	24.7	0.0	0.0	0.0	39.8	47.7	0.0	45.1
LnGrp LOS	A	A	A	C	C	A	A	A	D	D	A	D
Approach Vol, veh/h	1211			1369			5			311		
Approach Delay, s/veh	6.2			24.7			39.8			46.6		
Approach LOS	A			C			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	89.3			22.7			89.3			22.7		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	68.0			32.0			68.0			32.0		
Max Q Clear Time (g _c +t ₁), s	38.4			2.3			15.8			15.6		
Green Ext Time (p _c), s	8.4			0.0			6.0			1.1		
Intersection Summary												
HCM 6th Ctrl Delay				19.3								
HCM 6th LOS				B								

EXISTING AM

79: Access Ramp & Laurens Rd.

06/08/2021













							
Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	78	1227	1221	161	7	66	
Future Volume (vph)	78	1227	1221	161	7	66	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	90.8	90.8	76.4	76.4	11.2	11.2	
Actuated g/C Ratio	0.81	0.81	0.68	0.68	0.10	0.10	
w/c Ratio	0.23	0.45	0.53	0.15	0.43	0.44	
Control Delay	3.3	2.7	3.1	0.3	53.8	55.1	
Queue Delay	0.0	0.1	0.1	0.8	0.0	0.0	
Total Delay	3.3	2.7	3.2	1.1	53.8	55.1	
LOS	A	A	A	A	D	E	
Approach Delay		2.8	3.0		54.4		
Approach LOS		A	A		D		
Intersection Summary							
Cycle Length: 112							
Actuated Cycle Length: 112							
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection							
Natural Cycle: 60							
Control Type: Actuated-Coordinated							
Maximum w/c Ratio: 0.55							
Intersection Signal Delay: 5.4				Intersection LOS: A			
Intersection Capacity Utilization 54.6%				ICU Level of Service A			
Analysis Period (min) 15							

Splits and Phases: 79: Access Ramp & Laurens Rd.



EXISTING AM
791: Laurens Rd. & Airport Rd.

06/08/2021

						
Lane Group	SEL	SET	NWT	SWL	SWR	Ø4
Lane Configurations						
Traffic Volume (vph)	164	1129	1230	39	152	
Future Volume (vph)	164	1129	1230	39	152	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	90.8	90.8	76.4	11.2	11.2	
Actuated g/C Ratio	0.81	0.81	0.68	0.10	0.10	
v/c Ratio	0.48	0.41	0.55	0.47	0.41	
Control Delay	10.7	1.5	10.8	30.4	14.3	
Queue Delay	0.2	0.1	0.0	0.0	0.0	
Total Delay	11.0	1.6	10.8	30.4	14.3	
LOS	B	A	B	C	B	
Approach Delay		2.8	10.8	22.5		
Approach LOS		A	B	C		
Intersection Summary						
Cycle Length: 112						
Actuated Cycle Length: 112						
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.55						
Intersection Signal Delay: 7.8				Intersection LOS: A		
Intersection Capacity Utilization 62.0%				ICU Level of Service B		
Analysis Period (min) 15						



















Splits and Phases: 791: Laurens Rd. & Airport Rd.



EXISTING PM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.













06/08/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1502	13	35	1250	0	8	0	32	140	20	117
Future Volume (veh/h)	0	1502	13	35	1250	0	8	0	32	140	20	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbT})	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1565	14	36	1302	0	8	0	33	146	21	122
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	55	2787	25	249	2744	0	141	0	239	238	36	209
Arrive On Green	0.00	0.77	0.77	1.00	1.00	0.00	0.15	0.00	0.15	0.15	0.15	0.15
Sat Flow, veh/h	423	3609	32	324	3647	0	1245	0	1585	1376	238	1383
Grp Volume(v), veh/h	0	770	809	36	1302	0	8	0	33	146	0	143
Grp Sat Flow(s), veh/h/ln	423	1777	1865	324	1777	0	1245	0	1585	1376	0	1621
Q Serve(g _s), s	0.0	22.6	22.7	3.8	0.0	0.0	0.8	0.0	2.3	13.4	0.0	10.7
Cycle Q Clear(g _c), s	0.0	22.6	22.7	26.5	0.0	0.0	11.5	0.0	2.3	15.7	0.0	10.7
Prop In Lane	1.00		0.02	1.00		0.00	1.00		1.00	1.00		0.85
Lane Grp Cap(c), veh/h	55	1372	1440	249	2744	0	141	0	239	238	0	245
V/C Ratio(X)	0.00	0.56	0.56	0.14	0.47	0.00	0.06	0.00	0.14	0.61	0.00	0.58
Avail Cap(c _a), veh/h	55	1372	1440	249	2744	0	240	0	366	348	0	374
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.82	0.82	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	6.0	3.0	0.0	0.0	56.7	0.0	47.9	54.7	0.0	51.4
Incr Delay (d2), s/veh	0.0	1.7	1.6	1.0	0.5	0.0	0.2	0.0	0.3	2.6	0.0	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.3	7.6	0.2	0.2	0.0	0.3	0.0	1.0	4.8	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.6	7.5	4.0	0.5	0.0	56.9	0.0	48.1	57.2	0.0	53.6
LnGrp LOS	A	A	A	A	A	A	E	A	D	E	A	D
Approach Vol, veh/h	1579			1338			41			289		
Approach Delay, s/veh	7.6			0.6			49.8			55.4		
Approach LOS	A			A			D			E		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	105.4			24.6			105.4			24.6		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	89.0			29.0			89.0			29.0		
Max Q Clear Time (g _c +I1), s	28.5			13.5			24.7			17.7		
Green Ext Time (p _c), s	9.5			0.1			9.8			0.9		
Intersection Summary												
HCM 6th Ctrl Delay	9.5											
HCM 6th LOS	A											

EXISTING PM

79: Access Ramp & Laurens Rd.

06/08/2021

							
Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	155	1519	1209	246	22	83	
Future Volume (vph)	155	1519	1209	246	22	83	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	100.8	100.8	84.9	84.9	19.2	19.2	
Actuated g/C Ratio	0.78	0.78	0.65	0.65	0.15	0.15	
v/c Ratio	0.46	0.58	0.54	0.23	0.38	0.37	
Control Delay	9.9	12.5	4.8	0.4	53.4	53.4	
Queue Delay	0.0	0.6	0.2	0.8	0.0	0.0	
Total Delay	9.9	13.1	5.0	1.2	53.4	53.4	
LOS	A	B	A	A	D	D	
Approach Delay		12.8	4.4		53.4		
Approach LOS		B	A		D		
Intersection Summary							
Cycle Length: 130							
Actuated Cycle Length: 130							
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection							
Natural Cycle: 60							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.74							
Intersection Signal Delay: 11.3				Intersection LOS: B			
Intersection Capacity Utilization 59.9%				ICU Level of Service B			
Analysis Period (min) 15							











Splits and Phases: 79: Access Ramp & Laurens Rd.



EXISTING PM

791: Laurens Rd. & Airport Rd.

06/08/2021

						
Lane Group	SEL	SET	NWT	SWL	SWR	Ø4
Lane Configurations						
Traffic Volume (vph)	170	1432	1226	137	229	
Future Volume (vph)	170	1432	1226	137	229	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	100.8	100.8	84.9	19.2	19.2	
Actuated g/C Ratio	0.78	0.78	0.65	0.15	0.15	
v/c Ratio	0.52	0.54	0.57	0.74	0.48	
Control Delay	14.6	3.0	14.6	65.6	11.0	
Queue Delay	0.3	0.1	0.0	0.2	0.1	
Total Delay	14.9	3.1	14.6	65.8	11.1	
LOS	B	A	B	E	B	
Approach Delay		4.3	14.6	39.4		
Approach LOS		A	B	D		
Intersection Summary						
Cycle Length: 130						
Actuated Cycle Length: 130						
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.74						
Intersection Signal Delay: 12.3				Intersection LOS: B		
Intersection Capacity Utilization 69.4%				ICU Level of Service C		
Analysis Period (min) 15						




















Splits and Phases: 791: Laurens Rd. & Airport Rd.



2025 NO BUILD AM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.













06/08/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1271	2	25	1417	0	0	0	6	184	13	131
Future Volume (veh/h)	0	1271	2	25	1417	0	0	0	6	184	13	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1352	2	27	1507	0	0	0	6	196	14	139
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	64	2680	4	298	2616	0	64	0	277	306	26	255
Arrive On Green	0.00	0.74	0.74	0.24	0.24	0.00	0.00	0.00	0.17	0.17	0.17	0.17
Sat Flow, veh/h	348	3641	5	403	3647	0	1234	0	1585	1410	147	1460
Grp Volume(v), veh/h	0	660	694	27	1507	0	0	0	6	196	0	153
Grp Sat Flow(s),veh/h/ln	348	1777	1869	403	1777	0	1234	0	1585	1410	0	1607
Q Serve(g_s), s	0.0	17.5	17.5	6.2	41.8	0.0	0.0	0.0	0.4	15.0	0.0	9.7
Cycle Q Clear(g_c), s	0.0	17.5	17.5	23.7	41.8	0.0	0.0	0.0	0.4	15.3	0.0	9.7
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	64	1308	1376	298	2616	0	64	0	277	306	0	281
V/C Ratio(X)	0.00	0.50	0.50	0.09	0.58	0.00	0.00	0.00	0.02	0.64	0.00	0.54
Avail Cap(c_a), veh/h	64	1308	1376	298	2616	0	212	0	467	475	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.75	0.75	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.2	6.2	27.4	27.0	0.0	0.0	0.0	38.3	44.6	0.0	42.2
Incr Delay (d2), s/veh	0.0	1.4	1.3	0.5	0.7	0.0	0.0	0.0	0.0	2.2	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.6	5.9	0.7	19.9	0.0	0.0	0.0	0.1	5.4	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.6	7.5	27.8	27.7	0.0	0.0	0.0	38.3	46.9	0.0	43.8
LnGrp LOS	A	A	A	C	C	A	A	A	D	D	A	D
Approach Vol, veh/h	1354			1534			6			349		
Approach Delay, s/veh	7.6			27.7			38.3			45.5		
Approach LOS	A			C			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	87.4			24.6			87.4			24.6		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	68.0			32.0			68.0			32.0		
Max Q Clear Time (g_c+I1), s	43.8			2.4			19.5			17.3		
Green Ext Time (g_c), s	9.4			0.0			7.2			1.2		
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

2025 NO BUILD AM

79: Access Ramp & Laurens Rd.

06/08/2021

							
Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	87	1374	1368	180	8	74	
Future Volume (vph)	87	1374	1368	180	8	74	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	90.2	90.2	73.4	73.4	11.8	11.8	
Actuated g/C Ratio	0.81	0.81	0.66	0.66	0.11	0.11	
v/c Ratio	0.27	0.51	0.62	0.17	0.46	0.47	
Control Delay	6.8	3.2	3.8	0.3	54.1	55.4	
Queue Delay	0.0	0.1	0.2	1.0	0.0	0.4	
Total Delay	6.8	3.3	4.0	1.3	54.1	55.8	
LOS	A	A	A	A	D	E	
Approach Delay		3.5	3.7		54.9		
Approach LOS		A	A		D		
Intersection Summary							
Cycle Length: 112							
Actuated Cycle Length: 112							
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection							
Natural Cycle: 60							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.64							
Intersection Signal Delay: 6.1				Intersection LOS: A			
Intersection Capacity Utilization 59.7%				ICU Level of Service B			
Analysis Period (min) 15							

Splits and Phases: 79: Access Ramp & Laurens Rd.



2025 NO BUILD AM
791: Laurens Rd. & Airport Rd.

06/08/2021



Lane Group	SEL	SET	NWT	SWL	SWR	Ø4
Lane Configurations						
Traffic Volume (vph)	184	1264	1378	44	170	
Future Volume (vph)	184	1264	1378	44	170	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	90.2	90.2	73.4	11.8	11.8	
Actuated g/C Ratio	0.81	0.81	0.66	0.11	0.11	
v/c Ratio	0.58	0.46	0.64	0.50	0.43	
Control Delay	19.7	1.6	14.2	32.8	13.6	
Queue Delay	1.2	0.1	0.0	0.0	0.0	
Total Delay	20.9	1.7	14.2	32.8	13.6	
LOS	C	A	B	C	B	
Approach Delay		4.1	14.2	23.3		
Approach LOS		A	B	C		

Intersection Summary

Cycle Length: 112

Actuated Cycle Length: 112

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 10.1

Intersection LOS: B

Intersection Capacity Utilization 67.9%

ICU Level of Service C

Analysis Period (min) 15




Splits and Phases: 791: Laurens Rd. & Airport Rd.



2025 NO BUILD PM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.

06/08/2021

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1682	15	39	1400	0	9	0	36	157	22	131
Future Volume (veh/h)	0	1682	15	39	1400	0	9	0	36	157	22	131
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbt})	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1752	16	41	1458	0	9	0	38	164	23	136
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	55	2729	25	197	2688	0	149	0	264	256	39	231
Arrive On Green	0.00	0.76	0.76	1.00	1.00	0.00	0.17	0.00	0.17	0.17	0.17	0.17
Sat Flow, veh/h	364	3608	33	270	3647	0	1227	0	1585	1370	234	1386
Grp Volume(v), veh/h	0	862	906	41	1458	0	9	0	38	164	0	159
Grp Sat Flow(s), veh/h/ln	364	1777	1864	270	1777	0	1227	0	1585	1370	0	1621
Q Serve(g _s), s	0.0	29.8	29.9	7.5	0.0	0.0	0.9	0.0	2.7	15.1	0.0	11.8
Cycle Q Clear(g _c), s	0.0	29.8	29.9	37.5	0.0	0.0	12.7	0.0	2.7	17.8	0.0	11.8
Prop In Lane	1.00		0.02	1.00		0.00	1.00		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	55	1344	1410	197	2688	0	149	0	264	256	0	270
V/C Ratio(X)	0.00	0.64	0.64	0.21	0.54	0.00	0.06	0.00	0.14	0.64	0.00	0.59
Avail Cap(c _a), veh/h	55	1344	1410	197	2688	0	227	0	366	343	0	374
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.72	0.72	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	7.5	5.7	0.0	0.0	55.9	0.0	46.2	53.8	0.0	50.0
Incr Delay (d ₂), s/veh	0.0	2.4	2.3	1.7	0.6	0.0	0.2	0.0	0.2	2.7	0.0	2.0
Initial Q Delay(d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.0	10.5	0.4	0.2	0.0	0.3	0.0	1.1	5.4	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	9.8	9.8	7.4	0.6	0.0	56.1	0.0	46.5	56.5	0.0	52.1
LnGrp LOS	A	A	A	A	A	A	E	A	D	E	A	D
Approach Vol, veh/h		1768			1499			47			323	
Approach Delay, s/veh		9.8			0.8			48.3			54.3	
Approach LOS		A			A			D			D	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+R _o), s		103.3		26.7		103.3		26.7				
Change Period (Y+R _o), s		6.0		6.0		6.0		6.0				
Max Green Setting (G _{max}), s		89.0		29.0		89.0		29.0				
Max Q Clear Time (g _c +t ₁), s		39.5		14.7		31.9		19.8				
Green Ext Time (p _c), s		11.8		0.1		12.4		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				10.5								
HCM 6th LOS				B								

2025 NO BUILD PM

79: Access Ramp & Laurens Rd.

06/08/2021



Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	174	1701	1354	276	25	93	
Future Volume (vph)	174	1701	1354	276	25	93	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	99.8	99.8	80.3	80.3	20.2	20.2	
Actuated g/C Ratio	0.77	0.77	0.62	0.62	0.16	0.16	
v/c Ratio	0.54	0.65	0.64	0.27	0.41	0.39	
Control Delay	16.0	11.5	6.0	0.5	53.4	53.5	
Queue Delay	0.0	0.9	0.4	1.0	0.0	0.4	
Total Delay	16.0	12.4	6.3	1.5	53.4	53.8	
LOS	B	B	A	A	D	D	
Approach Delay		12.7	5.5		53.6		
Approach LOS		B	A		D		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 11.8

Intersection LOS: B

Intersection Capacity Utilization 65.6%

ICU Level of Service C

Analysis Period (min) 15











Splits and Phases: 79: Access Ramp & Laurens Rd.



2025 NO BUILD PM

791: Laurens Rd. & Airport Rd.

06/08/2021

						
Lane Group	SEL	SET	NWT	SWL	SWR	D4
Lane Configurations						
Traffic Volume (vph)	190	1604	1374	153	256	
Future Volume (vph)	190	1604	1374	153	256	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	99.8	99.8	80.3	20.2	20.2	
Actuated g/C Ratio	0.77	0.77	0.62	0.16	0.16	
v/c Ratio	0.61	0.61	0.67	0.79	0.50	
Control Delay	28.3	2.8	19.5	69.2	10.6	
Queue Delay	1.7	0.2	0.1	0.9	0.2	
Total Delay	30.0	3.0	19.6	70.1	10.8	
LOS	C	A	B	E	B	
Approach Delay		5.9	19.6	41.6		
Approach LOS		A	B	D		
Intersection Summary						
Cycle Length: 130						
Actuated Cycle Length: 130						
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.79						
Intersection Signal Delay: 15.3				Intersection LOS: B		
Intersection Capacity Utilization 76.2%				ICU Level of Service D		
Analysis Period (min) 15						




















Splits and Phases: 791: Laurens Rd. & Airport Rd.



2025 BUILD AM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.

06/08/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1306	2	25	1456	0	0	0	6	207	13	131
Future Volume (veh/h)	0	1306	2	25	1456	0	0	0	6	207	13	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{pbT})	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1389	2	27	1549	0	0	0	6	220	14	139
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	64	2620	4	277	2557	0	64	0	303	329	28	279
Arrive On Green	0.00	0.72	0.72	0.24	0.24	0.00	0.00	0.00	0.19	0.19	0.19	0.19
Sat Flow, veh/h	334	3641	5	389	3647	0	1234	0	1585	1410	147	1460
Grp Volume(v), veh/h	0	678	713	27	1549	0	0	0	6	220	0	153
Grp Sat Flow(s), veh/h/ln	334	1777	1869	389	1777	0	1234	0	1585	1410	0	1607
Q Serve(g _s), s	0.0	19.4	19.4	6.5	43.5	0.0	0.0	0.0	0.3	16.8	0.0	9.5
Cycle Q Clear(g _c), s	0.0	19.4	19.4	25.9	43.5	0.0	0.0	0.0	0.3	17.2	0.0	9.5
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.91
Lane Grp Cap(c), veh/h	64	1278	1345	277	2557	0	64	0	303	329	0	307
V/C Ratio(X)	0.00	0.53	0.53	0.10	0.61	0.00	0.00	0.00	0.02	0.67	0.00	0.50
Avail Cap(c _a), veh/h	64	1278	1345	277	2557	0	192	0	467	475	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.68	0.68	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.1	7.1	30.0	28.6	0.0	0.0	0.0	36.8	43.7	0.0	40.5
Incr Delay (d2), s/veh	0.0	1.6	1.5	0.5	0.7	0.0	0.0	0.0	0.0	2.3	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.5	6.8	0.7	20.8	0.0	0.0	0.0	0.1	6.0	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.7	8.6	30.5	29.3	0.0	0.0	0.0	36.8	46.1	0.0	41.7
LnGrp LOS	A	A	A	C	C	A	A	A	D	D	A	D
Approach Vol, veh/h	1391			1576			6			373		
Approach Delay, s/veh	8.7			29.3			36.8			44.3		
Approach LOS	A			C			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	85.6			26.4			85.6			26.4		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	68.0			32.0			68.0			32.0		
Max Q Clear Time (g _c +1), s	45.5			2.3			21.4			19.2		
Green Ext Time (g _e), s	9.5			0.0			7.6			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.4											
HCM 6th LOS	C											

2025 BUILD AM

79: Access Ramp & Laurens Rd.

06/08/2021

Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	116	1403	1407	180	31	74	
Future Volume (vph)	116	1403	1407	180	31	74	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effct Green (s)	87.6	87.6	69.1	69.1	14.4	14.4	
Actuated g/C Ratio	0.78	0.78	0.62	0.62	0.13	0.13	
v/c Ratio	0.37	0.53	0.68	0.18	0.48	0.38	
Control Delay	13.5	4.2	5.3	0.3	51.7	49.4	
Queue Delay	0.0	0.1	0.3	1.1	0.0	0.4	
Total Delay	13.5	4.3	5.6	1.4	51.7	49.8	
LOS	B	A	A	A	D	D	
Approach Delay		5.0	5.1		50.9		
Approach LOS		A	A		D		

Intersection Summary

Cycle Length: 112

Actuated Cycle Length: 112

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 7.6

Intersection LOS: A

Intersection Capacity Utilization 63.5%

ICU Level of Service B











Analysis Period (min) 15

Splits and Phases: 79: Access Ramp & Laurens Rd.



2025 BUILD AM
791: Laurens Rd. & Airport Rd.

06/08/2021







						
Lane Group	SEL	SET	NWT	SWL	SWR	Ø4
Lane Configurations						
Traffic Volume (vph)	213	1264	1378	96	209	
Future Volume (vph)	213	1264	1378	96	209	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	22.0	90.0	68.0	22.0	22.0	22.0
Total Split (%)	19.6%	80.4%	60.7%	19.6%	19.6%	20%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	87.6	87.6	69.1	14.4	14.4	
Actuated g/C Ratio	0.78	0.78	0.62	0.13	0.13	
v/c Ratio	0.67	0.48	0.69	0.68	0.47	
Control Delay	28.0	2.0	17.5	53.8	11.8	
Queue Delay	4.4	0.1	0.1	0.0	0.1	
Total Delay	32.4	2.1	17.6	53.9	11.9	
LOS	C	A	B	D	B	
Approach Delay		6.5	17.6	33.7		
Approach LOS		A	B	C		
Intersection Summary						
Cycle Length: 112						
Actuated Cycle Length: 112						
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection						
Natural Cycle: 60						
Control Type: Actuated-Coordinated						
Maximum v/c Ratio: 0.69						
Intersection Signal Delay: 14.0				Intersection LOS: B		
Intersection Capacity Utilization 73.9%				ICU Level of Service D		
Analysis Period (min) 15						

Splits and Phases: 791: Laurens Rd. & Airport Rd.



2025 BUILD AM
2: Airport Rd. & Full Movement

06/08/2021

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	223	214	12	13	91
Future Vol, veh/h	52	223	214	12	13	91
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	248	238	13	14	101

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	251	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1314	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1314	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.5	0	10.4
HCM LOS	B		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1314	-	-	-	533	794
HCM Lane V/C Ratio	0.044	-	-	-	0.027	0.127
HCM Control Delay (s)	7.9	-	-	-	11.9	10.2
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0.4

2025 BUILD AM
4: Access Ramp & RIRO





















06/08/2021

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↱	↱			↱
Traffic Vol, veh/h	0	26	275	52	0	0
Future Vol, veh/h	0	26	275	52	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	29	306	58	0	0
Major/Minor						
	Minor1	Major1	Major2			
Conflicting Flow All	-	306	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	734	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	734	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach						
	WB	NB	SB			
HCM Control Delay, s	10.1	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt						
	NBTWBLn1	SBT				
Capacity (veh/h)	-	734	-			
HCM Lane V/C Ratio	-	0.039	-			
HCM Control Delay (s)	-	10.1	-			
HCM Lane LOS	-	B	-			
HCM 95th %tile Q(veh)	-	0.1	-			

2025 BUILD PM

81: Shoppers Dr./Eastlan Dr. & Laurens Rd.













06/08/2021

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	0	1732	15	39	1443	0	9	0	36	191	22	131
Future Volume (veh/h)	0	1732	15	39	1443	0	9	0	36	191	22	131
Initial Q (Q ₀), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A _{PB} T)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1804	16	41	1503	0	9	0	38	199	23	136
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	0	2	2	2	2	2	2
Cap, veh/h	55	2646	23	175	2605	0	181	0	301	288	45	264
Arrive On Green	0.00	0.73	0.73	1.00	1.00	0.00	0.19	0.00	0.19	0.19	0.19	0.19
Sat Flow, veh/h	349	3609	32	257	3647	0	1227	0	1585	1370	234	1386
Grp Volume(v), veh/h	0	887	933	41	1503	0	9	0	38	199	0	159
Grp Sat Flow(s),veh/h/ln	349	1777	1865	257	1777	0	1227	0	1585	1370	0	1621
Q Serve(g _s), s	0.0	34.6	34.8	9.7	0.0	0.0	0.9	0.0	2.6	18.3	0.0	11.5
Cycle Q Clear(g _c), s	0.0	34.6	34.8	44.4	0.0	0.0	12.3	0.0	2.6	20.9	0.0	11.5
Prop In Lane	1.00		0.02	1.00		0.00	1.00		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	55	1302	1367	175	2605	0	181	0	301	288	0	308
V/C Ratio(X)	0.00	0.68	0.68	0.23	0.58	0.00	0.05	0.00	0.13	0.69	0.00	0.52
Avail Cap(c _a), veh/h	55	1302	1367	175	2605	0	230	0	366	344	0	374
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.63	0.63	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.3	9.3	8.1	0.0	0.0	52.8	0.0	43.7	52.4	0.0	47.3
Incr Delay (d ₂), s/veh	0.0	2.9	2.8	2.0	0.6	0.0	0.1	0.0	0.2	4.5	0.0	1.3
Initial Q Delay(d ₃),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.3	12.9	0.5	0.2	0.0	0.3	0.0	1.0	6.7	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.1	12.1	10.1	0.6	0.0	52.9	0.0	43.9	56.9	0.0	48.6
LnGrp LOS	A	B	B	B	A	A	D	A	D	E	A	D
Approach Vol, veh/h	1820			1544			47			358		
Approach Delay, s/veh	12.1			0.8			45.6			53.2		
Approach LOS	B			A			D			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	100.3			29.7			100.3			29.7		
Change Period (Y+Rc), s	6.0			6.0			6.0			6.0		
Max Green Setting (Gmax), s	89.0			29.0			89.0			29.0		
Max Q Clear Time (g _c +I ₁), s	46.4			14.3			36.8			22.9		
Green Ext Time (g _e), s	12.1			0.1			13.1			0.8		
Intersection Summary												
HCM 6th Ctrl Delay	11.8											
HCM 6th LOS	B											

2025 BUILD PM

79: Access Ramp & Laurens Rd.

06/08/2021

							
Lane Group	SEL	SET	NWT	NWR	NET	NER	Ø8
Lane Configurations							
Traffic Volume (vph)	216	1743	1397	276	59	93	
Future Volume (vph)	216	1743	1397	276	59	93	
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	
Protected Phases	1	6	2		4		8
Permitted Phases	6			2		4	
Detector Phase	1	6	2	2	4	4	
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?							
Recall Mode	None	C-Min	C-Min	C-Min	None	None	None
Act Effot Green (s)	97.6	97.6	74.9	74.9	22.4	22.4	
Actuated g/C Ratio	0.75	0.75	0.58	0.58	0.17	0.17	
v/c Ratio	0.66	0.68	0.71	0.28	0.48	0.36	
Control Delay	28.0	11.4	7.5	0.5	54.2	51.4	
Queue Delay	0.1	0.9	0.8	1.4	2.1	2.1	
Total Delay	28.1	12.4	8.3	1.9	56.3	53.4	
LOS	C	B	A	A	E	D	
Approach Delay		14.1	7.3		55.2		
Approach LOS		B	A		E		
Intersection Summary							
Cycle Length: 130							
Actuated Cycle Length: 130							
Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection							
Natural Cycle: 65							
Control Type: Actuated-Coordinated							
Maximum v/c Ratio: 0.90							
Intersection Signal Delay: 13.7				Intersection LOS: B			
Intersection Capacity Utilization 70.9%				ICU Level of Service C			
Analysis Period (min) 15							

Splits and Phases: 79: Access Ramp & Laurens Rd.



2025 BUILD PM
791: Laurens Rd. & Airport Rd.

06/08/2021



Lane Group	SEL	SET	NWT	SWL	SWR	Ø4
Lane Configurations						
Traffic Volume (vph)	232	1604	1374	210	299	
Future Volume (vph)	232	1604	1374	210	299	
Turn Type	pm+pt	NA	NA	Prot	Perm	
Protected Phases	1	6	2	8		4
Permitted Phases	6				8	
Detector Phase	1	6	2	8	8	
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	28.0	102.0	74.0	28.0	28.0	28.0
Total Split (%)	21.5%	78.5%	56.9%	21.5%	21.5%	22%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	97.6	97.6	74.9	22.4	22.4	
Actuated g/C Ratio	0.75	0.75	0.58	0.17	0.17	
v/c Ratio	0.72	0.62	0.74	0.90	0.54	
Control Delay	43.2	2.8	24.1	82.4	10.1	
Queue Delay	13.4	0.2	0.1	9.2	0.5	
Total Delay	56.5	3.0	24.2	91.6	10.6	
LOS	E	A	C	F	B	
Approach Delay		9.8	24.2	53.1		
Approach LOS		A	C	D		

Intersection Summary

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 0 (0%), Referenced to phase 2:NWT and 6:SETL, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 21.1

Intersection LOS: C

Intersection Capacity Utilization 83.6%

ICU Level of Service E






Analysis Period (min) 15

Splits and Phases: 791: Laurens Rd. & Airport Rd.

#79 #791 Ø1	#79 #791 Ø2 (R)	#79 Ø4
28 s	74 s	48 s
#79 #791 Ø6 (R)		#791 Ø8
102 s		28 s

2025 BUILD PM
2: Airport Rd. & Full Movement

06/08/2021

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	76	237	409	16	14	100
Future Vol, veh/h	76	237	409	16	14	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	263	454	18	16	111
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	472	0	-	0	894	463
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	431	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1090	-	-	-	312	599
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	655	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1090	-	-	-	288	599
Mov Cap-2 Maneuver	-	-	-	-	413	-
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	655	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.1	0		12.6		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1090	-	-	-	413	599
HCM Lane V/C Ratio	0.077	-	-	-	0.038	0.185
HCM Control Delay (s)	8.6	-	-	-	14.1	12.4
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.1	0.7

2025 BUILD PM
4: Access Ramp & RIRO

06/08/2021

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↘			↗
Traffic Vol, veh/h	0	28	475	76	0	0
Future Vol, veh/h	0	28	475	76	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	31	528	84	0	0
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	528	0	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	550	-	0	0	-
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	550	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.9	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBTWBLn1		SBT			
Capacity (veh/h)	- 550		-			
HCM Lane V/C Ratio	- 0.057		-			
HCM Control Delay (s)	- 11.9		-			
HCM Lane LOS	- B		-			
HCM 95th %tile Q(veh)	- 0.2		-			

QUEUING DATA AIRPORT ROAD

REVISED 1/24/2022

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Page 1002025 AM BUILD
QUEUES

08/04/2021

Intersection: 791: Laurens Rd. & Airport Rd.

Directions	SE	SE	SE	NW	NW	SW	SW
Directions Served	L	T	T	T	TR	LR	R
Maximum Queue (ft)	100	91	103	302	321	104	56
Average Queue (ft)	86	45	86	269	224	73	45
95th Queue (ft)	115	86	112	317	316	121	65

↳ ACCESS IS 425' FROM LAURENS RD.

2025 PM BUILD
QUEUES

08/04/2021

Intersection: 791: Laurens Rd. & Airport Rd.

Directions	SE	SE	SE	NW	NW	SW	SW
Directions Served	L	T	T	T	TR	LR	R
Maximum Queue (ft)	95	71	98	299	299	280	139
Average Queue (ft)	63	69	96	295	299	276	311
95th Queue (ft)	109	96	99	333	291	286	336

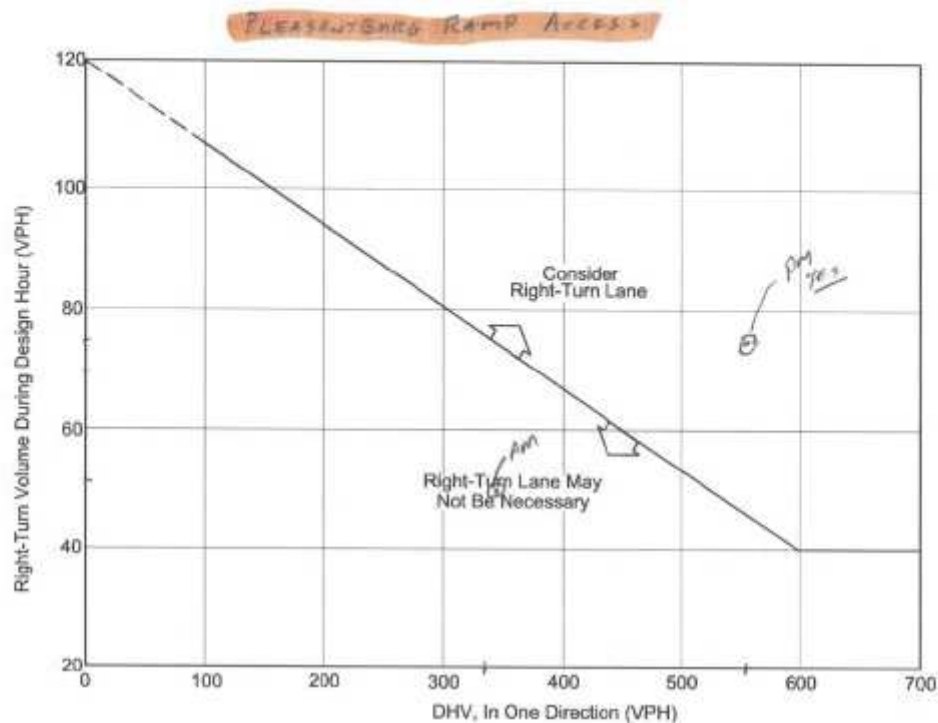
↳ ACCESS IS 425' FROM LAURENS RD.

TURN LANE NOMOGRAPHS

9.5-2

INTERSECTIONS

March 2017



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:

Design Speed	=	35 miles per hour
DHV	=	250 vehicles per hour
Right Turns	=	100 vehicles per hour

Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use $100 - 20 = 80$ vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

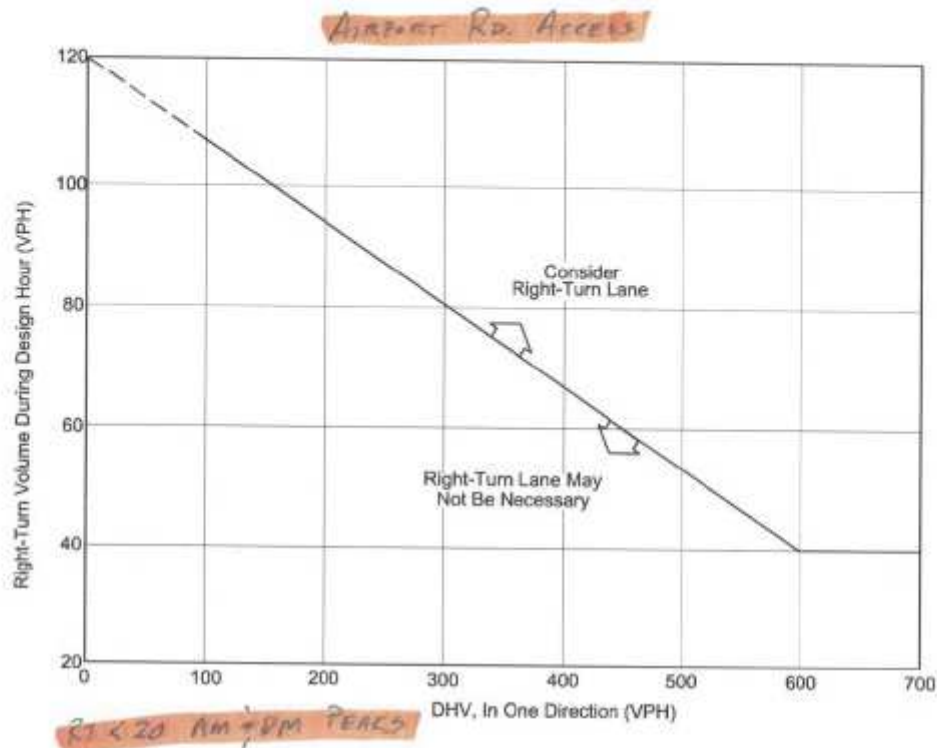
**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**

Figure 9.5-A

9.5-2

INTERSECTIONS

March 2017



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

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Problem: Determine if a right-turn lane is necessary.

Solution: To read the vertical axis, use $100 - 20 = 80$ vehicles per hour. The figure indicates that a right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**
Figure 9.5-A

**McCALL
CAPITAL**

MEETING NOTES

DATE: 10.14.2021

SUBJECT: Enclave Laurens Mixed-Use-Development
Neighborhood Meeting: Request for Rezoning from C-3 to PD
for Enclave Laurens Mixed-Use Development
City of Greenville, SC

Note: A Neighborhood meeting was held on 10/12/2021 from 6:00 PM – 7:30 PM in the Greenville Convention Center. Marcus McCall (McCall Capital), Nick Myers (Seamon Whiteside), and Chris Kacena (Studio Architects) presented the project to the neighborhood. A sign-in sheet is included as an attachment to this document. The following is a list of questions/concerns that were raised, and how the developer responded to and/or is addressing these items.

- What can be done to improve safety for pedestrians crossing the bridge over Pleasantburg Dr. towards downtown?
 - This area is outside the project boundary and/or control of the developer. However, pedestrians effectively will be able to “cross-over” Pleasantburg Dr. via the Swamp Rabbit Trail (“SRT”) extension through Enclave Laurens onto Airport Rd. and Laurens Rd.
- What is the timeline for the project?
 - We plan to start site work construction by Q2 2022.
- Can Airport Road be widened as part of this project?
 - The plan is to widen Airport Road as part of this project by adding a two-way left turn lane, as shown on the Site Plan.
- Will access be provided to Think Tank Brewery?
 - Think Tank Brewery will have access to Enclave Laurens via the SRT extension.
- How will parking be handled for the site?
 - Surface and structured parking will be provided as part of the project.
- What building will be built first?
 - We plan to start with the Phase I building, as shown on the Site Plan.

Falls Place
531 S. Main Street, Suite 207
Greenville, SC 29601

O 864.370.0037
mccallcap.com

Mailing: PO Box 2244
Greenville, SC 29602

-
- Are the buildings going to be apartment or town home style?
 - We plan to have a variety of mixed-uses for the buildings, including multi-family housing, as shown on the Site Plan.
 - How tall will the Phase I building be?
 - The intent is for Phase I to be a Midrise building over structured parking less than 100 feet in height.
 - Are you providing 2 parking spaces per MF unit?
 - No, the overall parking spaces for MF uses, as well as parking for the overall project, will be determined by the City of Greenville and the developer as part of the PD zoning process.
 - How will sewer be handled?
 - A new gravity sewer main was completed in 2018 by McCall Capital on behalf of the City of Greenville in preparation for Enclave Laurens, as well as other projects. A new sewer main will be constructed on site from the SRT extension to Airport Road to serve Enclave Laurens.
 - Do you see there being enough parking for people that aren't coming off of the Swamp Rabbit Trail extension?
 - Yes, we intend to have adequate parking for the project's mixed-uses.
 - How many parking spaces will be provided?
 - Currently up to approximately 760 spaces overall are shown on the Reg Plan.
 - Can you discuss the new lane in Airport Road?
 - The new lane will be a two-way left turn lane, as shown on the Site Plan.
 - Have we seen the City's proposed Swamp Rabbit Trail extension redevelopment study?
 - Yes, we met with the design team early on to discuss our design concepts and mixed-uses planned for Enclave Laurens.
 - Will sidewalks be provided as part of the project?
 - Yes, sidewalks will be provided along the N. Pleasantburg Dr., Laurens Rd., and Airport Rd. boundaries of the project, as well as a "multi-use trail" sidewalk to connect SRT extension to Airport Rd, as shown on the Site Plan.
 - How will you accommodate the backed-up traffic turning left onto Airport Rd. from Laurens Rd.?
 - We intend to provide access to the project from Laurens Rd. via left turn onto N. Pleasantburg on ramp with "right turn in" and "right turn out", including addition of a deceleration lane, as shown on the Site Plan.

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Neighborhood Meeting

Project Name: Enclave Laurens

Location:

Time of the meeting: 6:00 - 7:30 pmDate: 10-12-2021Representative holding meeting: Marcus S. McCall

Name	Street Address	Email
1 Emily Lamborn	1545 Laurens Rd.	elijah001@yahoo.com
2 Austin Rufford	206 S. Main St	av@atandcgreenville.sc.gov
3 Penny Mott	29 Colley Hill Ln	pennymott@francesmurphy.net
4 Brian Plank	123 Easton Dr	tyler.seneal@gmail.com
5 Tyler J. Halee Seneal	319 Sycamore Dr.	mbrantley@cybisc.com
6 Matt Brantley	1535 Laurens Rd.	kbrantley@att.net
7 Kevin Peart	207 Sparrow Dr	
8 Margaret Lavin	City	
9 Angler Desimery	100 W. Main St	jocmurray@carolina.or
10 Esther Allen	7 Easton Pl	esther.erb.athens@gmail.com
11 Aneta & Robert Hessel	2 Easton Pl	aneta.hessel@gmail.com
12 Mary Douglas Hirsch	206 S. Main St	mdhirsch@greenville.sc.gov
13 Nicole Martin	322 Sycamore Dr.	martinnik@earthlink.net
14 Attendees from Develop & Design Team		
15		
16 Marcus McCall	501 S. Main St Ste 207 G.Ville	mm@mcacallcorp.com
17 Mac McCall	531 S. Main St, Suite 207	mac@mcacallcorp.com
18 Shane Birkbichler	531 S. Main St, Suite 207	Shane@mcacallcorp.com
19 Linda Seiden	531 S. Main St, Suite 207	Lseiden@mcacallcorp.com
20 Chris Watson	508 Rhett St, Suite 101	chwatson@seamonwhiteside.com
21 Joe Bryant	508 Rhett St, Suite 101	jbrunty@seamonwhiteside.com
22 Will Buice	508 Rhett St, Suite 101	wbuice@seamonwhiteside.com
23 Nick Myers	508 Rhett St, Suite 101	nmymers@seamonwhiteside.com
24 Chris Ricketts	1000 Marietta St, Ste. 304 Atlanta, GA 30312	chricketts@studioarchitects.com
25		

**EXHIBIT C**

**Planning Staff Report to
Greenville Planning Commission
November 15, 2021
for the November 18, 2021 Public Hearing**

Docket Number:	Z-34-2021
Applicant:	Marcus McCall
Property Owner:	Enclave Laurens, LLC; Laurens 24, LLC
Property Location:	N. PLEASANTBURG DRIVE, LAURENS ROAD AND, AND AIRPORT ROAD
Tax Map Number:	025600-06-00100, 025600-06-00101, 025600-06-00102, 025600-06-01201, 025600-06-00200
Acreage:	12.79 Acres
Zoning:	C-3, Regional Commercial District
Proposal:	Rezone 12.79 ACRES FROM C-3 TO PD
Staff Recommendation:	Recommend Approval to City Council with Conditions and Comments

Applicable Sections of the City of Greenville Code of Ordinances:*Sec. 2-372, Function, Powers, and Duties of the Planning Commission**Sec. 19-1.3, Purpose and Intent**Sec. 19-2.1.2, Planning Commission Powers and Duties**Sec. 19-6.5, Design Standards for Nonresidential Development**Sec. 19-6.8, Design Standards for Multifamily Residential**Sec. 19-2.3.3, Planned Development District***Procedural Requirements:*****Pre-Application and Development Meeting***

The applicant held a pre-application meeting with City Staff on August 9, 2021. Discussions centered around architecture design, traffic, trail connectivity, fire access, and affordable housing.

Neighborhood Meeting

The applicant held a developer-led neighborhood meeting on October 12, 2021, post mailing of the required notice mailers. A list of meeting attendees and meeting summaries provided by the applicant are included within the Planning Commission packet.

Staff Analysis:

The applicant proposes to rezone five (5) parcels bordered by N. Pleasantburg Drive (west). Laurens Road (south) and Airport Road (east). These parcels are requested to be rezoned from C-3, Regional Commercial District, to PD, Planned Development District. The proposed site is also within the recently adopted Swamp

Rabbit Trail Extension Master Plan and is adjacent to the Nicholtown Revitalization Overlay District (kitty corner to Laurens Road bridge).

The site is the former home of the SCDMV and SCDOT. These structures have been demolished for years and the environmental cleanup of the property has been completed. The property is surrounded by commercial, including retail and restaurants. Some single-family residential uses are located within the area, including across N. Pleasantburg Drive and east down Airport Road.

The development proposal is intended to be an integrated mixed-use development with an assorted use of multi-family residential, retail, restaurant, office, and hotel. The plan includes the potential of up to three multi-family buildings with a maximum of 400 units, roughly 80,000 SF of commercial (office, retail, and restaurant), a 125-room hotel, and 60,000 sf of dedicated office space. The applicant proposes 734 to 760 parking spaces to accommodate parking needs for the development.

The application notes that 10% of the residential units will be workforce housing at 80% AMI. However, the application did not state a specific time period that the units will remain at a workforce rate.

The site will be connected by the existing street network and pedestrian walkways. Vehicular access will be provided at two (2) points of access from the access ramp on N. Pleasantburg Drive (right-in, right-out only) and Airport Road (full access). N. Pleasantburg Drive, Laurens Road, and Airport Road are South Carolina Department of Transportation (SCDOT) right-of-way and all traffic or sidewalk improvements must receive final review and approval by SCDOT.

Extensive pedestrian and bike infrastructure is also planned to include new and wider sidewalks along the main roads and a multi-use path connection to the Swamp Rabbit Trail extension.

Based on the PD district standards, the applicant provided a Statement of Intent and accompanying plans in order to identify and address the development program allowed uses, densities, configurations, design standards, and other development requirements established for this particular PD plan.

As stated in Sec. 19-3.2 (N), *Planned Development*, a PD is intended to encourage innovative land planning and site design concepts that conform to community quality-of-life benchmarks and that achieve a high level of aesthetics, high-quality development, environmental sensitivity, energy efficiency, and other community goals by:

- (a) Reducing or eliminating the inflexibility that sometimes results from strict application of zoning and development standards that were designed primarily for individual lots;

Comment: The current zoning designations of the site are C-3. The current C-3 zoning district would allow residential multi-family development up to 20 units/acre and allows for certain commercial uses. Under the current zoning, approximately 255 multi-family units could be developed. The applicant has stated that additional density and the multi-family use is needed to support the goal to create an urban node and to provide workforce housing. The density per acre proposed under this PD request is 31.3 units/acre.

The GVL2040 future land use map for this property calls for the area to develop as Corridor Mixed-Use, Urban Node Mixed-use, and Areas Suitable for Missing Middle Housing. The Corridor Mixed-Use designation calls for a mix of land uses including commercial, retail, and residential along major roads with buffering to adjacent neighborhoods. Urban Node Mixed-use designation calls for an urban form of 4-6 stories with public spaces designed to the human-scale. Average density is 30 units/acre. Areas suitable for Missing Middle Housing are noted areas of the City that are a 5 minute or ¼ mile walk from key centers of activity including downtown and other urbanized areas. Lastly, the applicant proposes roughly 2.5 acres of open space, roughly 20% of the site. The proposal appears to be generally consistent with the GVL2040 Comprehensive Plan, however, staff recommends that a project of this magnitude provide additional workforce units than what is proposed and to consider the inclusion of affordable units. Staff also finds that between the combination of open space provided onsite and the project's proximity to the Swamp Rabbit Trail extension, the PD addresses the GVL2040 priority of including and preserving open space.

Likewise, the adopted Swamp Rabbit Trail Extension Master Plan shows this intersection for redevelopment with medium-rise, mixed-use buildings. The master plan shows a new road to be established that could provide access from Airport Road to N. Pleasantburg Drive. The PD proposal includes this recommendation and as has been provided by the applicant.

A rezone to PD creates a single, cohesive zoning designation for all parcels contained within the site. Staff finds that is favorable for an area that proposes to contain mixed uses, because a Planned Development allows for some creativity designing mixed use neighborhood and nodes. The PD designation can provide for the density and height to provide for the urbanized node while providing for affordable housing units.

The applicant also requests flexibility with parking requirements for the development. The applicant proposes 734-760 parking spaces, dependent on the final determined uses. The breakdown of the request per use is provided as:

PARKING REQUIRED:

<u>USE</u>	<u>SIZE:</u>	<u>PARKING DEMAND:</u>	
Commercial (Office / Retail / Restaurant)	±*80,000 SF	160	(2 Spaces / 1,000 SF)
Hotel or	±125 Rooms	94	(0.75 Spaces / Room)
Office	±60,000 SF	120	(1 Spaces / 500 SF)
Multifamily	±400 Units	480	(1.2 Spaces / Unit)

TOTAL PARKING REQUIRED:	±734 Spaces or ±760 Spaces
--------------------------------	-----------------------------------

*80,000 SF does not include ±8,000 SF of Trailside Terrace for which dedicated parking is not proposed.

Under the current base zoning requirements, the multi-family component would have required 600 parking spaces alone.

The applicant has noted that the mixture of users and parking needs of the site should be lower than typically required per the LMO. Also, staff notes Laurens Road does have a Greenlink bus route, the 510 Laurens, and the SRT extension should allow alternative transportation needs for the development. Staff notes that Greenlink staff previously recommended to work with the applicant in order to establish a new or relocate a nearby bus stop for this location as a means to encourage bus ridership to and from the development. Staff provides concerns that the development is under-parked for bicycle parking spaces as demand from the adjacent SRT extension will increase. Staff recommends a minimum of 35 public bicycle spaces be provided to meet the future demand and to provide a reduction of the vehicular parking.

Staff finds the proposed street parking arrangement has currently not been provided for the need for American with Disabilities Act (ADA) spaces for the on-street parking. This may be addressed during the Final Development Plan (FDP) stage.

- (b) Allowing greater freedom in selecting the means to provide access, light, open space, and design amenities;

Comment: The site fronts on and has direct access to two streets. The applicant has provided two vehicular connections. Pedestrian and bicycle connectivity is improved with the proposal through wider sidewalks along thoroughfares and connection to the SRT expansion. Staff finds the design overachieves the interconnectivity goals of the LMO and the Swamp Rabbit Trail Extension Master Plan.

The design incorporates above average open space and recreational amenities and provides for urban building locations as shown within the Swamp Rabbit Trail Extension Master Plan. Open space is connected via an expansive sidewalk, multi-use path, and plaza system. These sidewalks also connect the open space to adjacent rights-of-way.

Though the applicant proposes a downtown-like sidewalk and plaza experience, they have proposed to increase the setback of most of the buildings and provide for more landscaping and natural light.

- (c) Allowing greater freedom in providing a mix of land uses in the same development, including a mix of housing types, lot sizes, and densities;

Comment: The intent of the Planned Development is to provide an urban node at the crossroads of two pre-interstate city highways filled with a mixture of uses including multi-family, office, hotel, retail, and restaurants connected directly to the future Swamp Rabbit Trail extension. The residential component, of this PD proposal, consists of multifamily units in the form of up-to-three urban-styled apartment buildings. The commercial tenants of the project have not been proposed, however, the applicant notes the proposed uses shall generally follow C-3 uses provided in the LMO.

Buildings are proposed to be restricted at a maximum building height of 100 ft.

- (d) Promoting quality urban and traditional neighborhood design and environmentally sensitive development by allowing development to take advantage of special site characteristics, locations, and land uses;

Comment: The site is uniquely positioned at the interchange of N. Pleasantburg Drive, Laurens Road, and Airport Road in the heart of the Swamp Rabbit Trail Extension Master Plan area. The applicant proposes to promote an urbanized development that consists of multiple structures and uses. The extra height and density proposed within the development allows for larger open space areas throughout the development that the statement of intent notes will include green infrastructure and a diversity of canopy trees.

The proposed development also meets the goals of the GVL2040 Comprehensive Plan, which calls for Laurens Road to become an urbanized corridor and for the Pleasantburg/Laurens interchange to be an urban node. Staff also finds the application largely consistent with the Swamp Rabbit Trail Extension Master Plan, which likewise indicates the area for urbanized multi-family. An urban node, such as proposed, is noted in GVL2040 to help prevent sprawl into more environmentally sensitive areas in the metro area.

- (e) Encouraging quality urban and traditional neighborhood design and environmentally sensitive development by allowing increases in base densities or floor area ratios when such increases can be justified by superior design or the provision of additional amenities such as public open space.

Comment: The proposed PD would allow for increased multi-family residential and commercial uses than what would be allowed under the current C-3 zoning. It also proposes to reduce parking and automotive-centric uses by enhancing pedestrian and bicycle connections to the Swamp Rabbit Trail.

The buildings are oriented and designed to engage the public realm on each street frontage and open space throughout the development. The project provides several areas of open space of both active and passive.

Staff maintains concerns on the design quality for the exposed parking garage facing N. Pleasantburg Drive. Staff recommends to ensure the garage is properly screened and provides a high level of design. Therefore, staff would recommend that the parking garage meet Downtown Design Guidelines PRI.10 to ensure a compatible design at the FDP stage. Staff would also

encourage the applicant to consider solar panels on the roof of the parking structure as shown in the SRT master plan.

Staff also notes the application does not reference the City Council adopted Swamp Rabbit Trail Extension Design Guidelines for the design of the pedestrian and bicycle infrastructure. To ensure a well-designed product that is in alignment with the latest safety techniques and designs, staff recommends the PD be conditioned to be built within these Design Guidelines.

The Purpose paragraph of Section 19-3.2.2(N)(1) concludes: *"In return for flexibility in site design and development, planned developments (PDs) are expected to include exceptional design that preserves critical environmental resources; provides above-average open space and recreational amenities; incorporates creative design in the layout of buildings, open space, and circulation; ensures compatibility with surrounding land uses and neighborhood character; and, provides greater efficiency in the layout and provision of roads, utilities, and other infrastructure."*

Staff finds the application to be in general compliance to the purpose and intent of a planned development district as stated above.

Design Review Board Comments

- Focus on pedestrian realm is great.
- Final architecture should be Greenville-centric. Local context is important.
- Concept is applaudable and will help regenerate Laurens Road.
- Will create good urban island where one has been needed.
- Open space and walkability are great. Road scale to massing will help create different experience compared to Downtown.

STAFF RECOMMENDATION:

Recommend Approval to City Council for Rezone to PD, Planned Development with conditions

Planning Staff Conditions:

1. Final Development Plans for the final design of all phases for multi-family structures, site plan, and landscape plan shall go before the Planning Commission for approval with Informal Review for architecture before the Design Review Board-Urban Panel. The FDPs for non-multi-family phases and structures shall remain at staff level.
2. The duration of affordable and workforce housing units shall be provided by the applicant and noted in the conditions by Planning Commission. Further, staff suggests that either Planning Commission and/or City Council discuss with the applicant on the possibility of a portion of the multi-family units being available at 60% AMI and/or increasing the total number of available units from 10%.
3. The applicant shall work with Greenlink staff to establish or relocate a nearby bus stop adjacent to the development to encourage non-automotive transportation means and to meet the proposed reduction of parking requirements.
4. At the FDP stage, the parking garage adjacent to N. Pleasantburg Drive shall meet the screening and design requirements found in the Downtown Design Guidelines PRI 10.
5. Pedestrian and bicycle infrastructure shall be compliant to the design requirements found in the City Council adopted Swamp Rabbit Trail Extension Design Guidelines. The number of publicly available bicycle spaces shall be 35 spaces.
6. Prior to receipt of a Certificate of Occupancy, an Affidavit of Substantial Compliance shall be provided at the time of Final Zoning Inspection.

Traffic Engineer:

Recommend: Approve w/ Comments

Comments:

Traffic impact analysis and queuing analysis have been received and approved.

Parks & Recreation:

Recommend: Approve w/ Comments

Comments:

1. If there is no dedicated bike storage within the parking garage (or other space within the development) then we'd recommend, at a minimum, doubling the quantity of bike parking spaces. We believe the adjacent Swamp Rabbit Trail will become a major amenity for residents and bike storage will be a valuable commodity.
2. Please refer to the Swamp Rabbit Trail Extension Master Plan for additional guidelines.

Fire Department Comments:

Recommend: Approve w/ Comments

Comments:

No opposition to rezoning

Environmental Engineer Comments

Recommend: Approve w/ Comments

Comments:

- 1) Wastewater – Wastewater service for the development will be subject to the following conditions:
 - a. There are existing City sewer mains available to serve this development. Sewer Capacity request has been submitted and approved for this development.
 - b. The wastewater permitting and acceptance process shall meet those requirements set forth in the City of Greenville Design and Specifications Manual Chapter 8.
 - c. Each building shall have a separate and direct connection to the City's sanitary sewer main.
 - d. Prior to using an existing lateral, the existing lateral must be tested to ensure that it conforms to City of Greenville performance requirements. Provide a video documenting the condition of the existing service connection prior to its reuse. A new lateral will be required if the existing lateral is in poor condition. The final Certificate of Occupancy will not be issued until the lateral is shown to be in good condition or a new lateral is installed.
 - e. Each building shall require a new service fee through ReWa.
- 2) Stormwater Management – The development is considered a larger common plan and must be performed in conformance with the City's stormwater ordinance (Article 19-7: Stormwater Management). Specifically, you will need to have a Professional Engineer prepare a non-single family site plan for the development and it will be subject to the following conditions:
 - a. A stormwater plan is required to be submitted with the non-single family site plan permit. Submit the major, minor or the soil erosion and sediment control stormwater plan as appropriate.
 - b. At a minimum, a stormwater plan should include:
 - i. Proposed layout.
 - ii. Appropriate erosion control best management practice standard details.
 - iii. A construction entrance.
 - iv. A concrete washout.
 - v. Silt fence
 - c. The plan should also show any drainage details needed to ensure the development will not adversely impact adjacent properties and will adequately control runoff from offsite.

- a. If the proposed development creates a new impervious surface greater than or equal to 0.25 acres, water quantity will be required for the 2, 10 & 25 year 24 hour storm event with no significant increase in the 100 year 24 hour storm event.
 - b. Any stormwater drainage system conveying offsite water shall be designed in compliance with the Stormwater Ordinance.
 - c. Water quality treatment is required when either:
 - The proposed development has a total impervious surface area ratio of 60% or greater and disturbs 50% or more of the parcel or larger common plan over a five year period; or;
 - The proposed development creates a new impervious surface greater than or equal to 0.25 acres.
- 3) Floodplain – A portion of the subject property is not located in a FEMA floodplain as determined utilizing 2019 Flood Insurance Rate Maps.

Civil Engineer Comments

Recommend: Approve w/ Comments

Comments:

Approved. No opposition to rezoning.

Tree and Landscape Comments

Recommend: Approve w/ Conditions

Comments:

A tree survey showing all trees 6-inch DBH or greater shall be provided prior to receiving to a site disturbance permit. A mitigation plan showing how any protected trees will be mitigated should be provided. Should full mitigation not be possible, a fee-in-lieu should be paid prior to any tree disturbance. Only 3" caliper canopy trees can be used for mitigation. A full landscape plan will also be required during the permitting phase to include appropriate street trees, parking lot landscaping, and site density trees. Foundation plantings will also be required around all commercial buildings.